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ABSTRACT

This collection contains abstracts of completed research projects in agricultural education from September 1, 1985 to August 31, 1986. Abstracts on a wide variety of subjects have been included. Some of the topics are as follows: advisory councils, agribusiness, agricultural mechanics, communication, computers, curriculum, educational needs, extension, farm management, student organizations, instructional materials, international, leadership, program effectiveness, student characteristics, teacher characteristics, teacher education, and teaching methods. Additionally, titles of research in progress have been compiled and included in the document. A total of 195 research abstracts of staff studies are included. Of this number, 98 abstracts are of master's papers or theses, 36 abstracts are of doctoral dissertations, and 61 abstracts are of other staff studies. The research abstracts are listed alphabetically by state in the first section of the document, as are the research and development activities-in-progress in section two. ERIC accession numbers for previous regional and national summaries are included, along with a list of previous national editors. Abstracts of completed studies are indexed by subject and by author. (KC)

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SUMMARIES OF RESEARCH AND DEVELOPMENT ACTIVITIES

IN AGRICULTURAL EDUCATION

in the
United States of America
1985-1986

Compiled and Edited
by
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U.S. DEPARTMENT OF EDUCATION
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February, 1987

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PREFACE

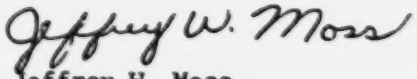
This document is the twelfth annual Summaries of Research and Development Activities in Agricultural Education in the United States. The "Summary of Studies" includes abstracts of completed research projects from September 1, 1985 to August 31, 1986. Abstracts on a wide array of subjects have been included with an index being provided at the end of the document. Additionally, titles of research in progress have been compiled and included in the Summaries.

A total of 195 research abstracts of staff studies have been printed. Of this number, 98 abstracts are of master's papers or theses, 36 abstracts are of doctoral dissertations, and 61 abstracts are of other staff studies. Thirty-four institutions from 29 states contributed to this year's Summaries. Twenty-one institutions responded to the announcement for contributions and indicated no research and development activities during 1985-1986.

The research abstracts are listed alphabetically by state in the first section of the Summaries. Similarly, the research and development activities in progress are listed alphabetically by state in section two. Eric accession numbers for previous regional and national summaries are included near the end of the document along with a listing of previous national editors. Both an author index and subject index for the abstracts of studies completed is found at the end of the Summaries.

This publication is authorized by the Research Committee of the Agricultural Education Division, American Vocational Association (AVA). Additional library or personal copies can be purchased for $9.00 each from the editor. A limited number of copies will be available.

As editor, I would like to recognize the assistance of Cindy Lass, graduate student in Agricultural Education, in compiling the document and preparing the index. This Summaries was only possible because of the efforts at each contributing institution. A special thanks is due to the many contributors. I hope that you will receive many benefits from reading about the research conducted in agricultural education during 1985-86.



Jeffrey W. Moss
Editor

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ALABAMA

Keita, Mamadou. (1986). Market study and year round farm plan for the Tuskegee University Small Model Farm. Master of Science Thesis, Tuskegee University, Tuskegee.

The purpose of this study was to collect and analyze information related to production and marketing for the Tuskegee University Small Model Farm and to use this information to develop a farm plan.

A questionnaire and on-farm record sheets were used to collect data on marketing and on the farm operations respectively.

Results indicated that (1) the diversification of crops and a combination of marketing alternatives were advantageous to the grower; (2) during the 1985 farm operation at the Tuskegee University Small Model Farm, production and marketing costs were estimated to be $9,117.47 with net returns of $9,701.82, and 2,411 labor hours were utilized on a 23 acre row-crop land; (3) of the nine enterprises selected for Farm Plan A, the sweet potato enterprise was the most profitable. The projected costs and returns for this commodity showed total operational costs of $17,770.67, net returns of $22,022.5, and total labor of 1,794 hours on 23 acres; (4) projected results from Farm Plan B utilizing nine crops, showed accumulated total operational costs of $13,342.81, net returns of $15,501.12 and, 2,265 hours were utilized for labor on 23 acres in partial double cropping; (5) projected increases of $12,320.68 in net income were shown in Farm Plan A, and Farm Plan B showed projected increases of $5,799.30 as compared to 1985 returns.

ARIZONA

Jones, R. T. (1985). Perceptions of public policymakers relative to the role and effectiveness of vocational education in Arizona. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of this study was to ascertain the opinions of selected public policymakers toward secondary vocational education in Arizona. Respondents were asked their opinions concerning: (1) the role of secondary vocational education; (2) the effectiveness of secondary vocational education; and (3) the needed improvements in secondary vocational education.

Findings of the study included: (1) There are four "high priority" roles for secondary vocational education. They were: (a) increase awareness of technology used by business/industry, (b) teach good work habits, (c) teach job skills, and (d) increase awareness of career opportunities; (2) Perceptions of the most effective outcomes of secondary vocational education were: (a) increase awareness of career opportunities, (b) teach job skills, (c) teach good work habits, (d) prepare people with job-specific competencies, and (e) increase awareness of technology used by business/industry; (3) There were three areas in which "increased effort" should be made to improve secondary vocational education. These were: (a) involving business/industry in the development of vocational education curricula, (b) teaching how to get and hold a job, and (c) involving business/industry in the evaluation of vocational education programs.

Ndaminin, Mohammed Bida. (1986). Course content useful in irrigation course at diploma level in Nigeria. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of this study was to identify from listed course contents that which is appropriate for inclusion in irrigation course at the diploma level in Nigeria.

Data collected were obtained by use of mailed questionnaire sent to 42 soil and water specialists in Nigeria. Thirty-six returned questionnaires, representing 85.7 percent of the expected number, provided the data which were analyzed accordingly.

From the ten main topics presented in the questionnaire, nine were considered essential or important for an irrigation course for diploma students in Nigeria and one as useful. None were considered irrelevant.

The type of professional duties performed by the soil and water specialists affected their perception on importance of three out of the nine main topics identified essential or important.

Out of the 45 subtopics listed under the nine main topics identified essential or important, eight were considered by the respondents to be given a maximum coverage and nine to have a general coverage. There was no general consensus among the respondents as to the depth of coverage for the remaining 28 subtopics.

Soleri, Daniela. (1986). Food gardens and some characteristics distinguishing gardening and non-gardening home-owning households in a low-income census tract of Tucson, Arizona. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of this study was to determine if there are differences in certain household characteristics, household income, and attitudes between home-owning households with food gardens and those without in a low-income census tract in Tucson, Arizona. Two random block samples, one of 15 food gardening households and the other of 15 non-gardening households from the same census tract were included in the study. Personal interviews were conducted during home visits to each household. The results showed that by comparison with non-gardening households, those with food gardens had more members, had a larger portion of income among them, had a greater awareness of insect problems, and tended to perceive gardening as a source of pleasure and relaxation. Indications of cultural differences among gardeners was expressed by their gardens. Two garden types were identifiable.

Tyson, C. B., Jr. (1986). Needs and constraints faced by the small-scale farmer in the San Pedro River Valley, Pinal County, Arizona. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of this study was to assess what the small-scale farmers of the San Pedro River Valley, Pinal County, Arizona perceived as their educational needs and non-educational constraints concerning agriculture and to supply supporting information to further comprehension of their situations. The method used was a descriptive study which utilized a questionnaire.

The accessible population for this study was comprised of two groups--22 families identified from Cooperative Extension Service mailing lists and 19 families from the survey area who volunteered their inclusion.

Soil fertility and food production/preservation techniques were deemed most important needs. Severe soil conditions, financial limitations, and limited markets warranted most concern.

The most common profile exhibited by farmers reflected: (1) land assets less than five acres; (2) involvement less than five hours daily; and (3) poultry, vegetable and/or fruit enterprises. The popularly voiced motivation and aspiration of the group was oriented to self-sufficient living.

Zurbrick, P. R. and D. E. Cox. (1986). A longitudinal comparison of the importance of teacher activities in vocational agriculture 1977-1984. Agricultural Experiment Station Research Report 289, The University of Arizona, Tucson.

This study provides a comparison over time of the perceived importance of the activities in which vocational agriculture teachers are involved as assessed by both teachers and their high school administrators (principals). The intent was to determine the concurrence of perceptions between the two groups at two different points in time and to discover relative changes which might suggest potential points of disagreement or misunderstanding. The 1977 accessible population included 65 vocational agriculture teachers and 44 secondary school principals. The 1984 population included 56 teachers and 44 principals. The response rate from teachers in 1984 was 78.6% and for principals 75.0%. By comparison, in 1977, the teacher response rate was 87.7% and from principals 91.1%. A total of 12% of the principals responding in 1984 were included in the 1977 study, while 38.6% of the 1984 teachers responding were also in the 1977 study. Supervised Occupational Experience programs and the activities carried out by teachers in support of it are not well understood or appreciated by high school principals. This may be due to its uniqueness to the vocational agriculture program. The lack of agreement appears to be a very serious and continuing problem requiring concerted action by all parties if it is to be resolved. Teachers appear to be reducing the importance placed on activities associated with youth leadership development (FFA). Both teachers and administrators appear to place similar value on the activities associated with the FFA.

Zurbrick, P. R. (1986). 1985 agricultural employment in Arizona. Agricultural Experiment Station Research Report 290, The University of Arizona, Tucson.

This report is based upon the results derived from a random sample survey taken in 1985 of 40% of previously surveyed businesses and on data provided by newly identified businesses contacted in 1985. A total of 1,638 businesses provided usable data for the study. Employment in jobs which employers considered to require agricultural competencies increased by some 20.9% between

1982 and 1985. Thus, in spite of difficult economic times in production agriculture and reduced employment in some government agencies, agricultural employment in Arizona has continued to expand through 1985. The number of people employed in horticultural jobs has shown a rapid increase in the past six years. Between 1979 and 1982, it increased by 70.8% and during the 1982 to 1985 period, the increase was 96.6%. Urban agriculture is expanding at an unprecedented rate, and if it continues, will represent as much as 35% of all agricultural employment by 1991.

CALIFORNIA

Palmer, Virgil L. (1986). Various characteristics and trends of California teachers of vocational agriculture. Master of Education Thesis, University of California, Davis.

This descriptive study concentrates on various issues regarding California teachers of vocational education. Specifically, various characteristics of those still teaching, those who taught at one time and those who never taught vocational agriculture were compared and analyzed in terms of demographics, background, precollege agriculture experiences, college preparation, teacher preparation and actual teaching experiences to determine the effect, if any, these phenomena had upon teacher longevity and satisfaction.

The population contacted consisted of everyone who received credentials to teach within a 10 year period. A second, and more comprehensive phase of the research consisted of administering a questionnaire to a random sample drawn from the total population within the target years. Thus each of the 713 credential holders had an equal chance of being selected and included in the 120 sample chosen for the second phase of this study.

Findings indicated that background experiences in vocational agriculture do help to determine teacher longevity and success. Those who leave the field or never enter the profession appear to have less experience before entering college than those who choose to stay. However, these differences appear less distinct once an individual enters and completes a credentialing program. There is also a difference in preparation and demographic orientation and background between conventional teachers of agriculture and those who pursue typically urban influenced varieties of vocational agriculture education.

Thompson, Orville E. & Gwynn, Douglas & Palmer, Virgil L. & Eaker, Rhonda. (1986). Profile of vocational agriculture teachers: trends in number, sex, preparation, and satisfaction of credential recipients. Staff study. Department of Applied Behavioral Sciences, University of California, Davis.

This monograph represents the combined work of three studies which analyze the status of agricultural education programs both nationally and in California. The first of these had as a purpose to gather nationwide data on the number of men and women receiving agriculture teaching credentials, number available to teach, and number actually placed in teaching positions. Also, teacher educators nationwide were asked their opinions about the problems faced by female agriculture teachers. This study serves as a baseline for subsequent surveys allowing for analysis of trends in vocational education.

This information raised questions about how California compared to the nation, leading to a second study which examined teachers who received their credentials in California between 1975-1984. Then, a stratified random group of teachers were interviewed by phone for more detailed information in a third study. In each study a principal concern was to document differences between the sexes regarding experiences, problems encountered, and success in this educational area.

Selected findings are summarized here. Women still experience discrimination in certain areas of vocational education. Teacher success and longevity is enhanced by appropriate background experiences in vocational agriculture before the credentialing process begins--for men as well as for women. A dichotomy exists between those credentialed who specialized in typically rural, farm oriented agricultural practices and those whose specialties are more in place at a city school.

Gwynn, Douglas & Thompson, Orville E. & Sharp, Charlotte & Wescott, Jan. (1986). The role of women in farming: an exploratory study of the relative impact women have on the farm enterprise. Staff study. Applied Behavioral Science Department, University of California, Davis.

This is a study of both the external conditions and internal perceptions influencing women's involvement in the farm enterprise. Despite California's prominence as the leading agricultural producer in the nation, this is the first study of women's roles in farming in this state.

In this study of farm women in Yolo County, California, data were collected by a telephone survey of farm wives in 228 different farm households in a random sample which was stratified by size of farming operation. Data were weighted to match that reported for Yolo County in the Agricultural Census.

The main criterion of whether or not women actively participate on the farm appears not to be farm size as much as the need for the extra work women supply as part of the family unity. Thus, the woman is less likely to be involved in the operation when labor can be sufficiently tapped through the husband, the male offspring, the extended family or hired help. On the other hand, if the above sources of labor are unavailable or the husband has an off-farm job, then the woman can be expected to have a greater degree of involvement in each of the three dimensions of farming: decision-making, production tasks and management support services.

Women who are more involved tend to be better educated, younger and more cognizant of problems encountered by farm women. They are also more likely to live on the farm and to perceive technology as having increased female activity in farming.

CONNECTICUT

Mannebach, Alfred J. (1986). Revising and updating the natural resources and aquaculture components of the Connecticut vocational agriculture curriculum. Staff, Study, University of Connecticut, Storrs.

The purposes of the project were: (1) to review, revise, and update the natural resources and aquaculture components of the Connecticut vocational agriculture curriculum; (2) to integrate needed competencies into each unit of instruction; (3) to enter the revised curriculum into the Connecticut State Department of Education computer system for easier updating in the future; (4) to print copies of the curriculum; and (5) to facilitate the promotion and dissemination of information about the aquaculture component of the curriculum.

The project was conducted as a result of joint planning by the peoject director and the state consultant on vocational agriculture, Connecticut State Department of Education. The project staff reviewed existing natural resources and aquaculture curricula, updated the natural resources and aquaculture units of instruction, integrated relevant competencies into each unit of instruction, and worked cooperately with natural resources teachers in the state to obtain their input, suggestions and feedback in the preparation of a relevant curriculum. The revised curriculum was entered into the Connecticut State Department of Education computer system and copies of the curriculum printed. An integral part of the project was the development of a flyer, brochure, slide set and promotion packet to assist in the implementation of the curriculum.

The updated curriculum will help students enrolled in the program to develop knowledge, skills and attitudes needed to become employed or self-employed in today's competitive labor market. The infusion of competencies into each unit of instruction will help Connecticut teachers of vocational agriculture make their instruction more competency based. Information which is disseminated about the curriculum will help personnel in educational institutions and agencies make decisions about offering such a program to meet current and projected labor market needs.

FLORIDA

Arrington, L. R., Beeman, C. E. and Wotowiec, P. J. (1985). Relationship between urbanization and supervised occupational experience programs in Florida. Staff study, University of Florida, Gainesville.

The central purpose of this study was to determine the effect of growing urbanization in Florida upon the SOE component of the secondary school vocational agriculture programs in the state. Using the Florida Agribusiness and Natural Resources Education Personnel Directory for 1984-85, 288 senior high school vocational agriculture teachers were identified. A random sample of 164 of those teachers were then extracted for this study. These teachers were asked to complete a questionaire soliciting information on teacher and program variables. These teachers were then sent student questionaires to administer to their 11th grade students to gather information about each student's place of residence and SOE program. Based on a review of previous studies, a five question index of urbanization was devised and field tested.

As a result of this study it was found that although urban and rural programs tended to have the same percentage of students with SOEP's, students in urban areas tended to have SOE's of smaller scope. Further, the highest ranked problem faced by Florida vocational agriculture teachers in providing SOE opportunities to students was considered by them to be limited facilities at the student's home. To combat this problem the teachers provided SOE opportunities to their urban students via use of the land lab for student projects.

Finally, recommendations from this study included that because urban student SOE's tend to be smaller, teachers of urban areas should strive to provide broad experience programs for their students. Further, teachers and school systems should emphasize the land lab as a method for providing SOE's for urban students. Additionally, agriculture-related job placement should be emphasized as an important method of providing SOE for urban students. Lastly, teachers should require SOEP's for all students, spend more class time related to SOE, and grade supervised occupational experience programs.

Burton, L. F. (1986). Subscriber satisfaction with the cooperative extension service-supported features of a south Florida commercial videotex system. Master of Science Thesis, University of Florida, Gainesville.

The central purpose of this study was to determine the degree of subscriber satisfaction with the Cooperative Extension Service

informational segments and "Ask the Expert" features of the commercial videotex system Viewtron, determine the readability level of the informational segments and determine subscriber familiarity with, and degree of recent use of the Cooperative Extension Service. To achieve this purpose, seven objectives were developed.

Data were collected by means of a survey on the videotex system. The respondents comprised an accidental sample. Fifty-nine responses were received. Analyses of data included frequencies, means, percentages and analyses of variance.

The major findings of the study were: (1) the majority of respondents were satisfied with the Cooperative Extension Service informational segments and "Ask the Expert" features of Viewtron; (2) the characteristic of the information segments respondents were least satisfied with was comprehensiveness; (3) the characteristics of the "Ask the Expert" feature respondents were least satisfied with were response time and comprehensiveness of responses; (4) there were no differences between subscriber satisfaction with the different informational segments with regard to the reason they accessed the information; (5) subscribers were most satisfied with the Stains, Houseplants and Gardening sections. They were least satisfied with the Lawn Care, Pests and Landscaping sections; (6) subscribers provided valuable and specific suggestions for information to be added to the system; (7) over half the respondents were not aware of the services and programs provided by the Florida Cooperative Extension Service. About three-fourths of the respondents had not utilized the Florida Cooperative Extension Service in the past 12 months; (8) the readability level of the informational segments was 8th or 9th grade.

Kamga, Andre. (1986). Factors related to adoption and non-adoption of technical and organizational recommendations by farmers involved with societe de developpement du cacao (SO.DE.CAO) in Cameroon. Master of Science Thesis, The University of Florida, Gainesville.

The purpose of this study was: to determine the extent to which demographic and situational characteristics, knowledge of farmers concerning black pod disease control and capsid control were related to adoption and non-adoption of technical and organizational recommendations by farmers involved with SO.DE.CAO. A stratified random sample of 413 cocoa farmers was drawn from a population of 20,542 farmers in three geographical sectors which have been working with SO.DE.CAO for at least 10 years. Data were collected through face-to-face interview and analyzed for frequencies, percents, means, standard deviations, medians, and mode. The Chi-Square test and the Pearson correlation coefficient were used for the measure of association.

The major findings were as follows: Cocoa farmers tended to have a relatively low educational level, the majority derived more than 76% of their total income from cocoa, had an insufficient and inadequate knowledge of black pod desease and capsid control. There was an association between sex, marital status, number of spouses, and the percentage of income derived from cocoa and the overall adoption of recommended practices. There was a positive correlation between knowledge of black pod disease control and capsid and the adoption of these two practices. Age was not correlated with the adoption of recommended practices. Only 53% of the cocoa farmers were using the recommended fungicide dosage to control black pod disease; however 90% knew the correct dosage to use. Further educational activities should continue to emphasize the development of knowledge as well as skill in extension efforts. Based on the fact that sex, marital status, number of spouses, and percentage of income derived from cocoa were associated with the adoption, further extension activities should focus on those farmers with these specific characteristics who tended not to adopt the practices studied.

Otsapa, A.A. (1986). A study of the management pratices of goat producers in selected counties in North Florida. Master of Science Thesis, Florida A&M University, Tallahassee.

The specific objectives of this study were: (1) to collect information on the present management pratices of goat producers; (2) to analyze the information collected to identify constraints limiting efficient goat production; and (3) to utilize the information collected and results of the analyses in making recommendations for use in developing educational programs for goat producers in North Florida and other areas of the state or elsewhere, where they could be applicable.

These objectives were achieved by utilizing questionnaires to elicit information from goat producers in Calhoun, Gadsden, Jefferson and Leon Counties. Forty-eight goat producers were surveyed in this study. The results showed that lack of organized market structure, low levels of management and production practices, and inadequate breeding practices are the major constraints limiting efficient goat production in these counties. Also, the chi-square test of significance was applied to some selected independent variables; it was found that production purpose was statistically significantly related to kidding rate, method used in raising goat kids and feeding method.

GEORGIA

Whitehead, David C. (1985). An analysis of micro-computer utilization in Vocational Agriculture departments in District III (Northeast) Georgia. Education Specialist Applied Project, The University of Georgia, Athens.

The purpose of this study was to analyze the quantities and types of micro-computers and accessories available to vocational agriculture teachers in District III, and to determine how micro-computers are being utilized indicating the problems in their utilization.

A survey was distributed to teachers in District III of Georgia. Of the 55 teachers surveyed, 42 completed and returned the form. Results indicated that 95.2% of the schools have micro-computers however two thirds of the respondents do not have one in their department. Reported uses of the micro-computer included equipment inventories (54.8%), maintenance of student grades (50.0%), classroom instruction (45.2%) and maintaining a listing of adult class members and young farmers (64.35). Over one-half of the respondents (54.7%) felt they had not had adequate training in the use of micro-computers and 52.4% indicated that their budget was inadequate to purchase needed software.

Recommendations generated from the study were that the State Department of Education should add micro-computers to the approved equipment list, the State Vocational Agriculture Specialist should provide training to teachers in District III on utilization and application of micro-computers, local systems should provide funds for the purchase of software and teachers should attempt to obtain training to increase their ability to utilize micro-computers in teaching and for administrative purposes.

IDAHO

Bramwell, Keith A. and Pals, D.A. (1986). The Idaho 4-H leadership development workshop. Master of Science Professional Paper, University of Idaho, Moscow.

The Idaho 4-H Leadership Development Workshop was developed to provide volunteer 4-H leaders with the understanding and skills necessary to successfully lead a 4-H club. The basic underlying assumption was that the workshop would decrease the rate of volunteer leader drop out, the low project completion rate and the low participation in some of the activities and programs. The workshop consists of seven seminars of two hours each. The concepts taught during the workshop included; understanding the background of 4-H, relationship between 4-H and the Land Grant System, organization of the county 4-H program, understanding of club organization, knowing and recognizing the needs of youth, understanding how to motivate youth, planning 4-H club activities, teaching methods, giving a demonstration, 4-H projects, Community Pride program, and opportunities for youth and leaders in 4-H. Two workshops were conducted and a questionnaire was developed to evaluate the workshops. The workshops were successful and the evaluation indicated that the workshop concept needs to be piloted in several more counties and further evaluated.

El-Mofty, A.H. and Riesenberg, L.E. (1986). The current status and future needs of tractor maintenance in agricultural mechanization stations in the Nile Delta of Egypt. Master of Science Technical Paper, The University of Idaho, Moscow.

The purpose of this study was to evaluate the current status of the tractor maintenance system in the agricultural mechanization stations in the Nile Delta and to predict the future need to improve the maintenance and repair system.

A survey form was used in Egypt to interview the station managers and engineers responsible for machinery repair and maintenance in the station. The survey list consisted of twelve pages and represented the following areas: (1) maintenance of agricultural power units; (2) procedures used for servicing agricultural power units; and (3) demographic information about the agricultural machinery centers. Five stations representing three different governorates in the Nile Delta were visited.

Recommendations include: (1) More attention should be given to performing maintenance. (2) More accuracy should be followed in performing the actual servicing procedures. (3) The headquarters should develop a detailed list of maintenance instructions concerning the maintenance performed every specific number of

hours of operation and the actual procedures for servicing all the tractor components. (4) More investigations are needed about the relatively larger stations and their maintenance systems. (5) More investigations are needed concerning the farmers dealing with the mechanization stations. (6) The training that the station workers receive to prepare them for their assigned jobs in the station, should be continuous.

Garrard, Richard M. and Pals, D.A. (1985). Cassia County enterprise budgets. Master of Science Professional Paper, University of Idaho, Moscow.

The purposes of this study were to develop enterprise budgets for the major crops grown in Cassia County, Idaho, and utilize a micro-computer electronic spreadsheet that will allow a systematic method of evaluating these budgets. A meeting was held with producers of the five major crops produced in Cassia County. Producers were selected on the basis of their history for keeping accurate records and their willingness to share them. Each farmer was given a blank enterprise budget and asked to fill in his actual expenses for producing that commodity. These figures were averaged together to represent an average cost of production. These figures were used on the enterprise budget developed. The Lotus template is being used by the five agriculture loaning institutions in Cassia County, other Extension Agents, and the vocational agriculture instructor in the county. There were over 100 farmers requesting the enterprise budget to assist them in producing their 1985-86 farm budgets in order to obtain operating loans.

Ismail, S.B.M. and Riesenberg, L.E. (1986). Development of a program for the prevention of sprout growth of stored onions in Somalia. Master of Science Technical Paper, the University of Idaho, Moscow.

The purpose of this investigation is to develop a program for the use of maleic hydrazide (MH) as a prevention of sprout growth of stored onions in Somalia and increase the availability of high quality onions. The specific objectives were to develop programs to: (1) create an awareness and interest in the use of MH by Somalia onion growers; (2) demonstrate the effectiveness of MH for Somalia onion grower by the use of training aids and demonstration plots; (3) train some onion growers to use MH on their farms; (4) conduct an evaluation of the adoption of MH use by the onion growers; and (5) determine where on going extension efforts should be focused.

The target audience for this program will be onion growers in ten villages. The program will consist of lectures, fieldwork, and discussion. The activities will take place at one of the Farmers' Training Centers. Demonstration plots will be conducted in cooperation with farmers on their farms. After harvest the onions from the demonstration plots will be separated from the rest of the onions and all of them will be stored under the same conditions. Field days will be organized and the onion growers in the area will be invited to see if there is any difference between MH-treated and non-treated onions and explanations will be given. Self-administered questionnaires will be distributed to 300 onion growers to evaluate the effectiveness of MH and the adoption of MH by the onion growers.

Ohlensehlen, R.M. and Riesenberg, L.E. (1986). Dairy waste management. Master of Science Technical Paper. University of Idaho, Moscow.

The major goal of this paper was to investigate the management of dairy waste. The paper reviews the following areas: (1) regulations and regulatory agencies; (2) general waste management; (3) mechanical design considerations; (5) storage systems; (6) aerobic lagoon systems; (7) anaerobic lagoon systems; (8) selecting lagoon type; (9) lagoon loading rates; (10) solids separation; (11) locating lagoon site; (12) other planning; and (13) system operation.

The management of dairy waste has become an important part of the total management requirements for a dairy herd. The dairyman has an obligation to his neighbors as well as his own family to produce a high quality product and to maintain the quality of the environment while doing so. To properly manage waste water and manure on a dairy operation requires careful planning. Producers should keep updated on changes in regulations that affect livestock waste management. Efforts of the producer may be of great value in avoiding confrontation with regulating agencies and be less costly in the long run.

Riesenberg, L.E. (1986). Individuals and/or factors influencing students to enroll in the College of Agriculture at the University of Idaho. Staff Study. University of Idaho, Moscow.

This study sought to identify the factors influencing students to select a particular college or university to attend from all the colleges and universities they considered. A mailed survey was distributed to all new freshman and transfer students

entering the College of Agriculture at the University of Idaho during Fall Semester 1985. Principle component analysis yielded ten (10) orthogonal factors. These conceptually meaningful factors hold promise for the development of marketing strategies for colleges of agriculture in terms of the type of information students will use in making decisions about a college or university to attend.

Ledington, R.L., and Slocombe, J.W. (1985) Factors limiting student participation in supervised occupational experience in vocational agriculture. Masters of Science Thesis, University of Idaho, Moscow.

The primary purpose of this study was to: (1)identify characteristics of Idaho vocational agriculture instructors and programs, (2) identify factors limiting student participation in SOE, and (3) determine if significant differences existed between vocational agriculture instructor and program characteristics and factors limiting student participation in SOE.

A significant difference existed between the: (1) vocational agriculture program score and highest degree held by the instructor; (2) economic score and highest degree held by the instructor; (3) economic score and percent of contracted time supervising SOE programs; (4) student score and total years of teaching; (5) social score by student enrollment in vocational agriculture.

Based on the findings of this study, the following recommendations were formulated: (1) instructors should require all students to conduct a SOE program, (2) students should be encouraged to develop SOE programs which provide educational experiences, (3) students with limited opportunities should be encouraged to use school laboratories or pursue SOE placement, and (4) the amount of time instructors devote to SOE should be further examined.

ILLINOIS

Alghamdi, M.H. (1985). Methods of disseminating agricultural information to the farmers and farm advisors of Al-Hassa Oasis in Saudi Arabia. Master's Study, Southern Illinois University, Carbondale, Illinois.

The farmers of Al-Hassa have needed effective methods to disseminate the results of research and scientific agricultural information from the College of Agriculture and its Research Station at King Faisal University. The problem was to determine which methods should be used by the Agricultural College to help farmers and farm advisors of Al-Hassa to make the necessary changes.

The population of this study consisted of farmers, farm advisors of Al-Hassa, and the teachers at the Agricultural College and its Research Station at King Faisal University. Data was collected with a questionnaire containing four sections: (1) sources of agricultural information for farmers and farm advisors; (2) the best methods for dissemination of agricultural information for farmers and farm advisors; (3) the existing cooperation between farm advisors and teachers of Agricultural College at King Faisal University; and (4) methods employed by Agricultural College at King Faisal University.

Based on the findings reported the following conclusions were formulated:

1. Methods employed to disseminate agricultural information from the Agricultural College at King Faisal University to farmers of Al-Hassa were not effective.
2. There was a lack of cooperation between teachers at College of Agriculture and farm advisors of Al-Hassa in dissemination of Agricultural information.
3. Personal farm visit was the best method used between farmers, farm advisors, and teachers.
4. Individual contact was the best category used between farmers, farm advisors, and teachers.
5. Scientific agricultural information that farmers of Al-Hassa received from King Faisal University was not enough nor effective.

Brehm, T.R. (1985) An analysis of competency-based laboratory exercises for AGEM 418 (Micro Computing for Agricultural Education). Master's Study, Southern Illinois University, Carbondale, Illinois.

The purpose of this study was to determine what steps were necessary in completing competency-based laboratory exercises for

AGEM 418 "Micro Computing for Agricultural Education". The objectives of this study were to determine the following: (a) steps considered necessary in completing each of the five laboratory exercises, (b) effectiveness of laboratory instruction as perceived by the students, (c) time required to complete laboratory exercises and homework assignments, and (d) relationship between laboratory time, student background, and student performance.

The study population consisted of those students enrolled in AGEM 418 during the Fall semester of 1985. Data was gathered from this population by a questionnaire. The questionnaire was given in five parts; each part dealing with a particular laboratory exercise for a given week.

Based on the findings reported in this study, the following conclusions were stated:

1. Of the forty-one steps tested, thirty-nine (95%) were considered necessary in completing the laboratory exercises.
2. Ninety-nine percent of the respondents agreed that laboratory instruction was necessary in completing the laboratory exercises.
3. Ninety-six percent of the students agreed that the laboratory instruction was adequate.
4. The average time required to complete either the laboratory exercises or the homework assignments was at least one hour.
5. A significant difference in laboratory time existed between students having previous typing experience and those having none. Students who had taken a typing course took longer to complete both laboratory exercises and homework assignments.

Chishimba, M.S. (1986) Ridge vs. flat tillage systems. Master's Study, Southern Illinois University, Carbondale, Illinois.

The goal of this study is to evaluate the performance of ridge and flat tillage systems using three different planting positions of corn, soybeans, and milo.

The objectives of the study were:

1. To prepare ridge and flat seedbeds, and plant. In addition, existing ridge area was to be planted.
2. To determine if there are differences in soil temperature between ridge and flat tilled seedbeds.
3. To determine if there are differences in soil moisture content between ridge and flat tilled seedbeds.
4. To determine if there are differences in population between ridge and flat tilled seedbeds.

5. To determine if there are differences in population between ridge and flat tilled seedbeds.
6. To determine if there are differences in plant growth between ridge and flat tilled seedbeds.
7. To determine if there are differences in crop yields between ridge and flat tilled areas.

These are some of the following recommendations based on this study:

1. The study should be continued, if any conclusions have to be drawn between ridge and flat tillage systems. In addition to the present variables, compaction should be included particularly in the existing-ridge-area.
2. If and when this study is conducted, planting after soil temperatures reach 13F and frost possibilities are minimum, should be the target.
3. Planting should be conducted with a fully mounted planter if furrow planting is to be included in the study.
4. Weed control study should be continued.

Cummings, K. (1986) A non-equivalents nursery operations curriculum designed for exceptional educational students of Broward County, Florida. Master's Study, Southern Illinois University, Carbondale, Illinois.

The purpose of this study was to develop a non-equivalent nursery operations curriculum for vocational exceptional education teacher and exceptional education students of Ornamental Horticulture in Broward County schools, Florida. This curriculum, as required by the Raise Bill, was designed for horticulture students considered educable mentally handicapped and trainable mentally handicapped.

The Quest Center, an exceptional education center located in Hollywood, Florida, provided the sample population representative of Broward County exceptional needs students designated to use this curriculum. The Quest Center students enrolled in horticulture ranged from thirteen to twenty-two years of age. They were classified as either educable or trainable mentally handicapped.

Data gather from the synthesis of the previously written curriculums was treated by its formulation into a non-equivalent Nursery Operations curriculum. The synthesis and treatment of content incorporated into the framework resulted in the Nursery Operations curriculum. development of the curriculum framework consisted of eleven separate sections.

Based on the findings reported in this study, the following conclusions may be stated:

1. A non-equivalent Nursery Operations curriculum outlining entry-level task and adaptations for prescribed vocational

exceptional education students was an effective teaching strategy for the horticulture teacher.
2. A non-equivalent Nursery Operations curriculum provided information and training for the gainful employment of the exceptional education student.
3. There was a need for dissemination of information to vocational teachers concerning the successful teaching and vocational training of specified populations.
4. The non-equivalent Nursery Operation curriculum designed for the exceptional education students of Broward County, Florida, met existing Raise Bill requirements. Also, it adopted frameworks and standards advised by Broward County, Florida educators.

Fehr, B.W. (1986). An electronic guidance system for row crop planters: a feasibility study. Master's Study, Southern Illinois University, Carbondale, Illinois.

The goal of this study is to examine the potential for using a microprocessor-based electronic guidance system to guide a row crop planter. The purpose of this electronic system is to reduce the complexity of the present mechanical guidance system by using the microprocessor.

A prototype electronic planter guidance system (EGS) was constructed and evaluated for its ability to guide a mock planter in laboratory setting. The four component parts of the operational EGS (the meta, the microcomputer, the dead reckoning guidance system [DRGS], and the ultrasonic guidance system [UGS]) were tested for their ability to function together and to provide heading steering information to a test operator.

The UGS could successfully provide sufficient information to the test operator to follow the directive within the controls limits of the UGS. In a limited study the ultrasonic range finding system exhibiting good potential to return an ultrasonic echo from a dirt furrow.

Based on the performance of the EGS in a test setting further work is justified in testing the system on a actual planter in field conditions. An improved method of setting the perceived directive in the DRGS to the actual furrow directive in the UGS needs to be developed to gain the full potential of the ability of the DRGS to traverse gaps in a discontinuous furrow. Because this research is an initial attempt to investigate this method of guidance, the deviation from actual field conditions were acceptable. Future research could investigate the EGS's ability to function in actual field conditions.

Hsieh, M.S. (1985). Comparing corn yield on elevated vs. flat soil profiles - double cropping in rice paddies. Master's of Science, Southern Illinois University, Carbondale.

The major problem of concern in this research is that soil conditions are too wet for double cropping corn following paddy rice production. This causes planting problems and limits corn yields.

Some of the objectives of this study were as follows:

1) To change field profile from conventional rice field profile to include elevated rows where corn may be planted.
2) To determine if there is a significant difference in soil moisture between elevated and flat row profiles.
3) To determine if there is a significant difference in soil temperature in seeding zone between treatments.

This experiment was conducted at the Southern Illinois University Agronomy Research Center, Carbondale, Illinois. The paddy for this study contained 1200 sq. ft. The soil was weir silt loam. The rice paddy profile was changed from the normal flat paddy to five flat rows and five elevated rows. The width of each row was two feet. The height of the elevated rows was one foot. From the planting of corn seeds to corn harvest the conditions of the changed rice paddy profile was good for sweet corn growth.

Based on the results of the data these conclusions and recommendations have been made:

1. The soil moisture in the elevated rows was significantly less than in the flat rows.
2. The soil temperature in the flat rows was significantly less than in the elevated rows.
3. The corn ear yield in the elevated rows was significantly greater than in the flat rows.
4. Additional research with the same soil type and same corn is recommended, including a close investigation of the physical conditions of the soil in both flat and elevated positions.

Lewis, J.D. (1986). Teacher concerns: a regional delivery system. Master's Study, Southern Illinois University, Carbondale, Illinois.

The purpose of this study was to identify concerns of Illinois vocational agriculture teachers about the regional delivery system. Also, this study presented these concerns to area vocational center teachers and collected the teacher's response to these concerns.

The population consisted of vocational agriculture teachers, area vocational center teachers, and state supervisors. All six NVATA regions were represented in the study. The teachers were

mailed a questionnaire to determine background information about them and the area center.

Concerns of Illinois vocational agriculture teachers were determined. Percentages and frequencies were calculated from responses of the area center teachers. Frequencies were determined for the effects of agriculture teaching positions after the implementation of a regional delivery system.

From the data presented in this study, the researcher formulated the following conclusions and recommendations:

1. Implementation of a regional delivery system did not increase the amount of paper work for the teacher.
2. Teacher's seniority was not affected by the implementation of a regional delivery system.
3. Vocational agriculture programs were not reduced at the high school when the regional delivery system was implemented.
4. A regional delivery system committee planner should be sent to planning meetings to explain the affect of regional delivery system on administrative assignments.
5. Publish the guidelines for teacher retention and reassignments based on a regional delivery system.
6. Regional delivery system schools should have a FFA chapter and the student participation should be supervised by the regional delivery school teacher.

Paige, B.S. (1986). <u>The relationship between per capita calorie supply and infant mortality in South Asia</u>. Master's Study, Southern Illinois University, Carbondale, Illinois.

The purpose of this study is to examine the relationship between per capita calorie supply and infant mortality in South Asia. The objectives of this study were to determine the following:

1. What was the calorie supply available in South Asia for the years 1975-1980 as reported by the World Bank?
2. What was the level of infant mortality in South Asia for the years 1975-1980 as reported by the World Bank?
3. What is the relationship between infant mortality and per capita supply in South Asia for the years 1975-1980?

The following conclusions were drawn from analyzing the research questions. Much of Asia does not have access to the amount of food required for normal body functioning. Per capita calorie supply ranged from 79.9% in Bangla Desh in 1975 to 112.9% in Burma in 1980. The average per capita calorie supply for all of South Asia for 1975-1980 remained under 100%.

One in every ten infants born in South Asia will die before his/her first birthday. Infant mortality rates ranged from 161.5

deaths per thousand live births in 1975 in Nepal; 47.0 in Sri Lanka in 1980. The average infant mortality rate for South Asia remained above 110% for the six years studied.

A strong inverse relationship was found between per capita calorie supply and infant mortality in South Asia for the years studied. When per capita calorie supply was low, infant mortality rates were high and when per capita calorie supply was high, infant mortality rater were lower. A final conclusion that can be drawn from this study is that as populations are supplied with more calories to consume, less infants are likely to die.

Schonert, L. (1986) A comparison of beginning teachers and experienced agriculture teachers as to when consultation of and administrator is required. Master's Study, Southern Illinois University, Carbondale, Illinois.

The major purpose of this study was to identify the problem areas in agriculture education face by a beginning teacher which would require the consultation of an administrator.

The following are a few questions which the study should help to answer:

1. When and for what reasons should a beginning teacher consult an administrator or supervisor?
2. When and for what reasons do experienced teachers consult an administrator or a supervisor?
3. When and for what reasons do administrators or supervisors feel they should be consulted?

A questionnaire was selected as the most appropriate instrument to gather the information needed. The administrator and experienced teacher questionnaires were given to the sampler by the university student teacher coordinator in January of 1982. The questionnaires for beginning teachers were mailed to the random sample population in January of 1982.

Based on the results of this study, the researcher came to the following conclusions:

1. Administrators consistently recommended that beginning teachers consult administration more often than experienced teachers with education related problems or areas and discipline situations.
2. Beginning and experienced teachers do not consult administrators as often as the administrators feel they should with education related problems or areas and discipline situations.
3. Beginning teachers consult administrators more often than experienced teachers with education related problems or areas and discipline situations.

Based on the results of this study found the following

recommendations have been made:

The results of this study should be given to beginning agriculture teachers and future teachers of agriculture to make them aware of what education related areas and discipline situations administrators feel they should and should not be consulted.

Sloan, A.E. (1986) A comparison of spring ridge tillage to conventional spring tillage. Master's Study, Southern Illinois University, Carbondale, Illinois.

The goal of this study is to determine if there are advantages in using spring ridge tillage over conventional spring tillage on corn and soybean production in southern Illinois.

The objectives of this study were:

1. To determine if there is a difference in power and fuel requirements between lister and moldboard plowing.
2. To determine if there is a difference in the soil temperature between a flat seedbed and a ridged seedbed at equal depths.
3. To determine if there is a difference in the soil moisture content between a flat seedbed and a ridged seedbed at an equal depth.
4. To determine if there is a difference in plant population between a flat seedbed and a ridged seedbed.
5. To determine if there is a difference in plant growth between a flat seedbed and a ridged seedbed.
6. To determine if there is a difference in crop yield between a flat seedbed and a ridged seedbed.

The study was conducted to compare a lister to a moldboard plow as a primary tillage tool for corn and soybean production in southern Illinois. The study was conducted at two locations, the Belleville Research Station, R.R. 1, Belleville, Illinois and the Agronomy Research Center, R.R. 4, Carbondale, Illinois.

Some of the following recommendations were made:

1. Planters with disc openers should be used to plant the seedbeds since they are more suited to cloddy soil conditions with high crop residue.
2. Weeds should be controlled as they present themselves to reduce the competition with the crops.
3. Ridge tillage using a lister should be compared to the till-planted method to determine any difference in the soil's physical conditions and crop responses.

Flowers, James. (1986). Effects of the problem solving approach on achievement, retention, and attitudes of vocational agriculture students in Illinois. Ph.D. Thesis, the University of Illinois at Urbana-Champaign.

The primary purpose of this study was to compare the effects of the problem solving approach and the subject matter approach to teaching a selected problem area of vocational agriculture. Student achievement, retention, and attitudes toward the teaching method were used as criteria to determine the effectiveness of the two approaches. A secondary purpose of this study was to compare the time required to complete instruction in the selected problem area using the two teaching approaches.

The target population for this study consisted of high school vocational agriculture students enrolled in introductory vocational agriculture courses. Since random assignment of students to treatment groups was not possible, a quasi-experimental design was used. In order to control for teacher effect, the four teachers selected to participate in this study taught one class using the problem solving approach and one class using the subject matter approach. Treatments were randomly assigned to the classes. There were 68 students in the problem solving group and 61 students in the subject matter group. An achievement test and attitude instrument were administered immediately following instruction in the problem area. A parallel retention test was administered one week after the achievement test. In order to control for possible preexisting group differences, grade point averages in the first semester of vocational agriculture and student IQ scores were used as covariate measures in the study. Data were analyzed by means of multivariate and univariate analyses of covariance, t-tests, and descriptive statistics.

No significant differences existed between the two groups in student achievement, student retention, test scores, student attitude, or time required to teach the lesson. A significant difference in favor of the problem solving treatment groups existed in student retention as measured by achievement loss.

Harryman, William. (1985). An examination of neglected issues in Illinois no-till adoption research and the educational implications thereof. Ed.D. thesis, the University of Illinois at Urbana-Champaign.

American farmland has long been considered an inexhaustible resource. To protect this resource, "society", primarily through legislative pressure and educational efforts, has demanded "Agriculture" change from the traditional moldboard plow based farming technology to reduced tillage systems, the ultimate of which is the

no-till system--placing the seeds in very narrow slots without disturbing last year's crop residue.

This paper, part of a larger no-till study, compares no-till innovators to the general farm population; compares no-till innovators in two parts of Illinois; investigates characteristics of farmer-innovators who tried and continued no-till, and those who discontinued no-till; and compares the effect of experience on no-till use and perceptions.

Development of improved herbicides, no-till planters, and "societal encouragement" have expanded the no-till practice, despite possible yield decreases.

An examination of 203 no-till innovators determined they were younger, had greater gross farm income and larger farms than the base population. Group differences showed higher farm income, and, initially fewer no-till acres in the north, where no-till was considered an "environmental innovation".

Southern innovators reported more off-farm employment and income, used no-till for more years, and considered no-till both an "income enhancement" device and an "environmental innovation." "Agencies," important sources of no-till information, showed regional differences. Discontinuers had less peer contact than Continuers, perhaps a function of their greater off-farm work, and less farm income.

Earlier innovators were more environmentally concerned than the later innovators, who had more gross farm income, more off-farm income, and smaller farms with less no-till than "Early Innovators."

This research suggests more individual contact (one-on-one) teaching is needed both to individualize the no-till practice for each farm situation, and to provide the personal support (strokes) needed for continuance of the practice.

Koehnen, Timothy. (1986). A comparative analysis of instructional resources at intermediate agricultural schools in developing nations. Ph.D. Thesis, the University of Illinois at Urbana-Champaign.

The purposes of the study were: (1) to describe the intermediate agricultural schools through key educational resources in their instructional program; and (2) to determine if there were any significant differences within the nominal variables by specific indicators of the educational program. The directors at these intermediate agricultural schools were surveyed by a mailed questionnaire developed through a University of Illinois Research Project headed by Burton E. Swanson. The exploratory study analyzed 235 institutional questionnaires from Third World countries. Institutional quality was assessed by staff size and educational level, adequacy of instructional materials, importance of the school farm for agricultural training, and adequacy

of capital items and operating supplies for the school farm instructional program. An analysis of the institutional quality indicators by the nominal variables infers that there is a significant difference among institutions across geographical regions, level of per capita income in low income countries, and among types of educational systems. Also, the data analysis dispells the common perception that ministry of agriculture funded institutions are different from the ministry of education supported institutions.

The instructional program at institutions of intermediate agricultural schools involves educational components such as qualified faculty, instructional materials, and a supervised school farm instructional program. Faculty range from a Ph.D. degree level to less than a B.Sc. degree level with the majority at the lower educational qualification. Further, a majority of institutions require additional instructional materials.

The majority of graduates from these institutions are being employed by national extension systems. These institutions train field level workers for the transfer of technology to the agricultural producers in low income countries. The instructional program is usually completed within two to three years. The graduates then serve as the frontline workers in government extension agencies and other middle level agricultural positions.

Pepple, J. D. and Flowers, J. (1985). Identifying morale factors which motivate teachers toward excellence. Staff Study, The University of Illinois, College of Agriculture, Vocational Agriculture Service, Urbana.

The purposes of this study were to determine: (1) how the morale of Illinois vocational agriculture teachers compare with the morale of other junior and senior high school teachers; and (2) the general level of morale of Illinois vocational agriculture teachers in those categories associated with job dissatisfaction. The sample embraced three groups: (1) those with less than two years experience and did not enroll in the Illinois Beginning Teacher Program; (2) those with less than two years experience and did enroll in the Illinois Beginning Teacher Program; and (3) those with ten or more years experience. The Purdue Teacher Opinionaire was the instrument used to measure teacher morale. Studies by Sergiovanni and Starratt (1971) were used to identify morale factors associated with job satisfaction and dissatisfaction. The responses were analyzed using individual and group median and percentile scores. Based on these responses the findings were: (1) the three groups were not significantly different in their level or morale; (2) Illinois vocational agriculture teachers reported levels of morale well below the fiftieth percentile; and (3) job dissatisfiers which were reported below the tenth percentile were teacher load and community pressure, and those at or below the thirtieth percentile were teacher rapport with principal, rapport among teachers, and teacher status.

Pepple, J. D. and Flowers, J. (1986). An analysis of the relationship among selected variables and the morale of Illinois vocational agriculture teachers. University of Illinois, College of Agriculture, Vocational Agriculture Service, Urbana.

The purpose of this study was to determine the relationship between selected demographic variables and the morale of Illinois vocational agriculture teachers. The Purdue Teacher Opinionaire was used to measure teacher morale. The PTO yields a total morale score and sub-scores for ten categories associated with morale. A second instrument was developed to obtain selected demographic data on twenty-four variables. The response rate was 85%. Data were analyzed using frequencies, means, Pearson correlations, and analysis of variance. Findings indicate that morale of vocational agriculture teachers can be enhanced by certain variables such as:

(1) recruiting current vocational agriculture students into teaching, (2) emphasizing the importance of professionalism, SOEP's, advisory committees, and modernization of equipment and facilities as these factors were significantly related to higher teacher morale. Also issues relating to job success, career goals, achievement, and balancing the job with family and personal responsibilities were determined to be related to levels of morale.

Pepple, J. D., Law, D. L., and Smith, J. E. (1986) Regional survey of agricultural occupations. University of Illinois, College of Agriculture, Vocational Agriculture Service, Urbana.

The purposes of this study were to: (1) identify agribusinesses in a region within Illinois: (2) determine existing occupations within the region, and (3) determine educational requirements for employees working within these occupations. This was a descriptive study designed to collect and describe specific data about the population using survey research techniques. The population for this study was all agribusinesses located in the five county labor shed area of the Illinois Heartland Education for Employment Service Region. This was a telephone survey using random sampling with replacement techniques. Data were analyzed using frequencies, means, and percentages. Some of the major findings were: (1) A majority of employers (57%) hire recent high school graduates with no college experience; (2) Employers (77%) believe it desirable for new employees to have had agricultural education when applying for a job with their firms; (3) A majority of agribusinesses (72%) employ less than 25 people; (4) A majority of employers (92%) feel employees will need about the same or more agricultural education in the 1990's; (5) The three major functions of agribusinesses are servicing, retailing, and wholesaling; and (6) Smaller agribusinesses have a greater need for agriculturally competent applicants than larger businesses.

Walker, Paul and Buriak, Phil (1985). Performance of a Harvestore 420 horizontal batch feed mixer and a Steiner drum-type batch feed mixer. Funded study. Department of Agriculture. Illinois State University, Normal.

Several criteria may be used to evaluate the performance of batch mixers. One of the most important criteria is the uniformity of dispersion of different feed ingredients throughout the batch mixture. Uniformity of dispersion is a function of mixing ability and product loss during the mixing operation. The total amount and composition of product loss greatly affects final diet composition, specifically if the product is a trace ingredient. The amount and composition of any feed left in the mixer after unloading can have similar effects on uniformity.

The effect of partial filling on the uniformity of the mixture must also be considered. Many farmers, anticipating future expansion, may buy a mixer larger than their operation requires or from time to time may need to mix small batches , consequently operating the mixer at less than maximum capacity. On the other hand, in an effort to conserve expenses farmers may purchase the smallest unit capable of handling their operation resulting in operating the mixer at maximum recommended capacity.

Starting and operating power requirements of the electric motor are also important in considering efficiency of operation and economy of operation over the mixers effective lifetime. This study was partially funded by A.O. Smith Harvestore Products, Inc.

The study found that both mixers generally did a good job of mixing. Per dollar invested the rotary mixer was competitive with the horizontal mixer for most diets. On the basis of this study, if the farmer is looking for a low cost mixer capable of mixing major dietary components, then he should consider a rotary mixer. If, however, the farmer is fine tuning his operation to incorporate various trace additives and micro nutrients in his diets and if accuracy of mixing a variety of diets is important, then a horizontal batch mixer is the best way to go.

Whitacre, R., O'Rourke, P. and Buriak, Phil (1985). Off-farm employment interests and related educational needs. Staff study. Department of Agriculture. Illinois State University, Normal.

A recent U.S. Department of Agriculture study of the financial condition of American farmers found that over four percent were in such poor financial shape that they would have to give up farming in 1985. The study found another eight percent were in "critical" condition and nearly thirty percent had moderate to serious financial problems.

Because of these financial problems, some farmers and their wives will be forced into the off-farm job market. It is the interest of Illinois State University to meet the educational needs of these producers as they enter the job market on a full-time or part-time basis.

Two surveys were conducted to determine off-farm employment needs and educational interests of area farmers. One survey was mailed to area farmers, another to area businesses.

The surveys indicated that there was a demand for courses that would enhance the employability of farmers and their spouses seeking off-farm employment. Additionally, area businesses indicated they were inclined to hire farmers if they possessed the necessary skills. A substantial number of area businesses indicated they would be willing to cover at least some of the educational expense of their employees.

Courses in computer operations, accounting and business management were perceived by farmers to be most important in increasing their employability; however the survey of area businesses ranked speech, writing and sales training as the most important skills an employee must possess.

Wood, Jeffrey A. (1986). Labor market information: Opportunities in Illinois Agriculture. Funded study. Department of Agriculture. Illinois State University, Normal.

The purpose of this study was to determine what occupational opportunities exist in McLean County Illinois in the agricultural

sector. Reliable labor market information from traditional sources often are not truly indicative of the nature of the agricultural sector nor do they reflect many of the employment opportunities that exist in agribusiness and many other supportive and allied industries. Therefore, to answer a State Board of Education mandate that all vocational education programs in the state be based on labor market information, this study was developed to ascertain what employment opportunities existed in McLean County Illinois. A telephone survey of over 400 agricultural businesses and production enterprises was conducted over a two week period. The telephone interviews were conducted by trained personnel sensitive to agriculture and telephone surveying techniques. The interview schedule was field tested and approved by a panel of experts.

Findings revealed that nearly thirty percent of the surveyed firms give consideration to hiring individuals with high school experience in agriculture. Nearly sixty percent indicated advanced training in postsecondary institutions was desirable for employment considerations, and eight percent indicated school experience at any level, secondary or postsecondary was not a prerequisite for employment consideration within their firm.

Results from the study were utilized to formulate recommendations to the State Board of Education that agriculture is an important economic factor in McLean County and it should be fully supported by increasing resources for vocational agriculture programs.

Wood, Jeffrey A. (1986). Proportions of general, professional and technical course offerings in programs leading to teacher certification in agriculture. Staff study. Department of Agriculture. Illinois State University, Normal.

The purpose of this study was to investigate the status of general, technical and professional curricular offerings by institutions with teacher training programs in agriculture. Two objectives were identified for the purpose of conducting the study. They were: (1) to conduct a census of teacher education programs in agriculture for the purpose of compiling data concerning the amount and percent of curriculum required in general, technical and professional education; and (2) compare the curricular offerings in general, technical and professional education by land grant and non-land grant institutions and by AATEA region.

A census was conducted by means of a mailed questionnaire to each head teacher educator listed in the 1985-86 Directory of Agricultural Teacher Educators. Teacher educators were asked to list credit hours in general, technical and professional education required for certification of teacher trainees at their respective institutions. Responses from institutions operating under the quarter hour system were adjusted to reflect semester hours. A response rate of 81 percent was realized in the survey. A follow-up of non-respondents was conducted to ascertain if significant differences existed between respondents and non-respondents. Because the data represent a population census, only descriptive statistics were used.

The survey results indicated that the proportion of course requirements for those seeking certification at land grant institutions in agriculture is approximately 37 percent general education, 39 percent technical agriculture, and 23 percent professional education courses. The survey indicated that individuals seeking certification from non-land grant institutions are required to complete 37 percent general education, 44 percent technical education, and 19 percent professional education. There were slight numerical differences in the total number of semester hours required for certification between land grant and non-land grant institutions. There was also slight numerical differences in the number of semester hours required between general, technical and professional education from AATEA region to region. The results provide baseline data for further study of the optimal curricular blend for persons preparing to teach agriculture.

INDIANA

Peters, J. L., & Pershing, J. A. (1986). Evaluation of a statewide pilot project to integrate an online agricultural information network into the classroom. Staff Study, Purdue University, West Lafayette.

Based on the need to strengthen the computer literacy of vocational agriculture teachers in working with current information technology and the hardware that supports it, a state funded project connected 37 schools with vocational agriculture programs to the Agri-Data Network system for the time period of June 1, 1985 to June 30, 1986.

A telephone survey was conducted at the conclusion of the project to collect information on the feasibility and use of the Agri-Data Network.

Findings indicated that teachers felt an online agricultural information network, specifically the Agri-Data Network, added a new dimension to the teaching of vocational agriculture. All the teachers agreed that the system was easy to access, provided current up-to-date information, and brought additional information that they would not normally see or know existed into their classroom.

IOWA

Abeysekera, R. S. (1986). The perceived supervisory role expectations of extension professionals in Iowa. Master of Science Thesis, Iowa State University, Ames.

The overall purpose of the study was to identify the supervisory skills that should be possessed by area extension directors, as perceived by beginning extension professionals of the Iowa Cooperative Extension Service. A subsidiary purpose was to determine the extent to which beginning extension professionals needed further inservice training needs in supervision. The population of this study consisted of all county extension professionals who had been working in the Iowa Cooperative Extension Service for 36 months or less. Fifty-six professionals qualified for the study and 51 persons responded to the researcher developed self-administered mail questionnaire. The questionnaire consisted of 94 items requiring two responses. Respondents were asked to indicate their levels of agreement (on a 5 point Likert scale) concerning role expectations under and the level of help needed. Data were analyzed using means, standard deviations, frequencies, and percentages. Comparisons were made within the population by groupings based on level of education, gender and years of experience in the Cooperative Extension Service. The Cronbach Alpha procedure was used to test the reliability of the instrument, which was found to be .82 for the expectation scale and .87 for the need for further assistance scale. The findings indicated that most of the supervisory role expectations listed in this study were identified as being areas in which beginning professionals required further assistance. Fourteen of the 94 supervisory role expectations were rated by the beginning extension professionals as being very important about which supervisors should be well informed and trained. There were few differences between males and females, bachelors and masters degree holders, and among different experience groups. The results of this study provided supervisors and administrators with information about expectations, perceptions and present professional needs of their supervisors. This information provided the framework for inservice training for supervisors.

Bia, J. (1986). Analysis of needs: adult and postsecondary agricultural education in the Eastern Navajo Agency. Doctor of Philosophy, Iowa State University, Ames.

The major purpose of this study was to determine the need for adult and postsecondary agricultural education in the Eastern Navajo Agency. The study established a profile of Navajo agricultural producers and agricultural production in the Agency, deter-

mined perceptions of conditions and need for agricultural education, determined extent of interest in specific agricultural topic areas, tested relationships between perception of and interest in agricultural education, and developed equations for predicting level of interest in agricultural topics.

The population of the study was comprised of 150 Navajo adults who attended one of the educational meetings conducted in nine communities throughout the Agency during March and April, 1986. A survey instrument was developed and used to collect the data. The response mode on the survey instrument utilized a five point Likert scale. Parametric and nonparametric statistical procuedures were used to analyze and summarize the data. The survey instrument was found to have a reliability coefficient of .84 for the perception scale and .94 for the interest scale (Cronbach's Alpha).

The major findings of the study were: (1) according to all indicators (land size, income, livestock holdings), the respondents were small scale producers; (2) the majority of the respondents used friends/other ranchers as sources of new information about livestock production and/or range management; and (3) livestock products were used primarily for domestic consumption. Other findings indicated that (4) the respondents believed there was a real need for agricultural education in the Agency; (4) agricultural topics of most interest to the respondents were livestock management and range management; (6) and the preferred educational meetings were workshops/seminars on a periodic basis at the community level for local producers. Finally, the results indicated that (7) there was no signficant relationship between perception about conditions/need for agricultural education and level of interest in agricultural education; (8) none of the demographic variables investigated made a significant contribution to the prediction of the level of interest in agricultural topic areas; (9) and the respondents perceived there was a lack of job and business opportunities in the Eastern Navajo Agency.

Bunting, D. M (1986). Attitudes and perceptions of young farm men and young farm women towards women in nontraditional agricultural work roles. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to determine: (1) the attitudes and perceptions of young farm men and women toward women in agricultural work roles, (2) differences between men and women in attitudes and perceptions of women working in agricultural work roles grouped by demographic factors, and (3) attitudes and perceptions of young farm men and women towards women as effective workers in agriculture.

One hundred men and 100 women were randomly selected from a list of young farmer chapters in Iowa. Questionnaires were mailed to each participant. Seventy-six percent (152) completed and returned the questionnaire. The questionnaire contained twenty-two questions referring to women in specific agricultural work roles, six statements which identified specific work roles traditional to women, and thirty items referring to the effectiveness of women in specific agricultural work roles.

Of the men and women studied, approximately 90 percent agreed at the 3.7 (much agreement) level that women should be employed in nontraditional agricultural work roles. Approximately 85 percent at the 3.7 level indicated that women were effective workers in agricultural work roles. Less than 10 percent disagreed or had no opinion about wormen in agricultural work roles or their effectiveness in those roles.

T-tests between gender group means revealed that there were significant differences between means of men and women for both attitude toward and effectiveness of women in agricultural work roles. Persons with greater than seven person contacts with women in agricultural work roles had a significantly different mean score than all other contact groups studied.

Ejembi, E. P. (1985). Regional attitudes toward basic principles of agricultural education in Nigeria. Master of Science thesis, Iowa State University, Ames.

The purpose of this study was to analyze regional differences in attitudes toward eight basic principles of agricultural education developed as a part of Project 2000 conducted at Iowa State University. Six groups of people in 115 school communities in Nigeria were selected for the study. Respondents were interviewed to collect the desired information and their responses grouped into five regions on the basis of geographic, historical, and cultural similarities.

Regional mean comparisons revealed that all eight principles had means above 64.0 (much importance) on a 99-point scale. Multivariate analysis of variance revealed significant regional differences in the respondents' attitudes toward the eight principles. The Riverine region mean (66.7) for the principle "meeting individual and societal needs" was the highest, and was signficantly different from all other region means. East Central, North, Riverine and Southwest region means for "participation in a democratic society" were significantly different from the mean for the Middle Belt region.

"Learning to solve problems" had the overall highest mean (70.0) in the Riverine regions which was significantly different from the means for the other four regions. "Producing and managing agricultural production" group means in the East Central, North, and Riverine regions were significantly different from those of the other two reion means.

Principle means and standard deviations by respondent groups revealed that "providing flecibility and program continuity" had the highest mean for all groups. All groups considered the principle "meeting individual and societal needs" least important (63.5). "Producing and managing agricultural production" had the second highest mean for students, teachers, government officials and farmers/business people.

Hackbarth, P. A. (1986). A comparison of two forms of microcomputer-assisted instruction of crop production for training Iowa vocational agriculture instructors. Master of Science thesis. Iowa State University, Ames.

The purpose of this study was to compare the effectiveness of two kinds of software for computer-assisted instruction in crop production with Iowa vocational agriculture instructors. Microcomputer-assisted instructional materials with complete documentation were prepared in the form of electronic spreadsheets and BASIC programs. The sample for this study consisted of 63 vocational agriculture instructors who participated in one of five microcomputer inservice workshops. A post-test-only control group design was employed. Data were collected by a survey, a programming test, and a knowledge exam. Each instrument was reviewed by a panel of experts and reliability was computed as a part of the data analysis.

An analysis of civariance was used to test for significant differences in posttest achievement scores based on the form of software. No significant difference was found in achievement level based on the form of software used. No significant difernce was found in achievement based upon the interactions betweeen the form of software and the instructor characteristics and attitude. It was concluded that both BASIC programs and electronic spreadsheet programs were equally effective in teaching crop production concepts to vocational agriculture instructors.

Hamilton, P. C. (1986). Effectiveness of computer/video assisted instruction for adults in a nonformal setting. Doctor of Philosophy dissertation, Iowa State University, Ames.

The purpose of this study was to determine whether adult students learn at a different level when taught by computer/video assisted instruction when compared to a conventional approach such as lecture with questions and overhead projections. Interactive lessons on agricultural futures hedging and agricultural futures options were written by the investigator. Computer/video assisted futures options lessons were presented to the treatment group. A video tape showing futures trading activity at the Kansas City Board of Trade was shown to the participants. Overhead transparencies that emulated the computer screens enhanced the lecture and questioning instruction of the control group.

Three groups of nonformal adult students (N=60) were selected to participate in the study. The Randomized Solomon Four-Group Design was used to overcome problems of external validity found in some studies in which an interaction effect was found between pretest and the treatment. The four groups included the following: (1) no pre-test/no treatment; (2) pre-test/no treatment; (3) no pre-test/treatment; and (4) pre-test/treatment.

Comparisons of pretest and post-test group means revealed that the post-test mean score for both the control and experimental groups were higher than the pre-test group means. Group pre-test mean scores were observed to be significantly different; however these differences did not carry over to the post-test mean scores or the differences between pre- and post-t-est mean scores for each group. Regression analysis of variables using post-test means as the dependent variable revealed that pre-test score, educational level, sex, high school agricultural instruction, and location accounted for the majority of variance among group means. Significant differences were observed between experimental and control group pre- and post-test mean scores when grouped according to educational background of the participants.

Johnson, D. A. (1986). Responsibility and effectiveness of county 4-H agricultural extension workers. Master of Science thesis. Iowa State University, Ames.

The purpose of this study was to identify which professional extensions staff member in each Iowa county was in charge of the majority of the activities in the 4-H agricultural program. One-hundred and forty-three 4-H professional staff members and county extension agriculturalists participated in the study. The respondents were questioned about 26 activities included in the 4-H

agricultural program.

Data were collected by questionnaire. A .96 reliability alpha was derived for the instrument using Cronbach's test for reliability.

4-H leaders had primary responsibility for program planning, organizing and developing 4-H agricultural leader training, providing leaders with project information on an individual basis, and determining 4-H member training needs. Agricultural staff members had primary responsibility for developing project information and teaching and training of 4-H leaders. Field trips and workshops were coordinated by the 4-H and youth staff member. Agricultural staff members had the major responsibility for working with computers and county fair livestock activities. Publicity concerning 4-H agricultural projects and processing of state fair entries were conducted by the 4-H and youth leader. Respondents perceived the job of the agriculturalist to be that of the teacher of 4-H agricultural program subject matter. Correspondence and encouragement of 4-H agricultural projects were the responsibility of the 4-H and youth leader.

Klocke, S. J. (1986). A follow-up study of Iowa State University farm operation curriculum graduates from 1959 to 1984. Master of Science thesis. Iowa State University, Ames.

The purpose of this study was to conduct a follow-up study of Iowa State University Farm Operation Curriculum graduates from February, 1959 to May, 1984 to secure information which would assist the faculty and staff of the Farm Operation Curriculum in evaluating the present program and planning future programs. The sample for the study included 1737 Bachelor of Science degree graduates, Questionnaires were sent to all graduates in the sample except for those who had international addresses or no address available. The final return was 713 respondents or 41.05 percent of the sample. The respondents were divided into two groups, farmers and nonfarmers. Farmer was the current occupational title listed by 60.1 percent of the respondents.

No significant differences existed between farmers and nonfarmers in perceptions of adequacy of training in fifteen selected skill areas in the Farm Operation Curriculum. No significant difference was observed in the respondents' perception of the adequacy of advising in the Farm Operation Curriculum. No significant difference was observed in the respondents' perception of satisfaction with the choice of Farm Operation as a major.

Knobloch, T. A. (1985). Factors affecting student achievement in a BASIC computer programming undergraduate course in agricultural mechanization at Iowa State University. Master of Science thesis. Iowa State University, Ames.

The purpose of this study was to determine what selected factors affected the achievement of students enrolled in a BASIC computer programming course offered by the Agricultural Engineering Department, Iowa State University. This research was conducted to substantiate the findings of a previous study of the same course. A posttest-only control-group design was used for the study. Course sections and instructors were randomly assigned to experimental or control groups. The treatment consisted of computer assisted instruction materials developed and used in the previous study. The control group did not have access to the materials. The materials were designed to assist students in learning to use the BASIC computer language. A demographic survey, an attitude inventory, and a knowledge test were used to collect the data.

The factors that significantly affected student achievement were: average mathematics grade at the secondary and post-secondary levels, the amount of previous microcomputer experience, and the amount of previous microcomputer instruction. An analysis of covariance failed to show posttest knowledge scores were affected when the students were grouped by teaching method. This finding supports the previous study. It was concluded that computer assisted instruction is as effective as conventional instruction.

Martin, R. A. (1986) Analysis of needs: educational programs for young and adult farmers. Staff Study. Iowa State University, Ames.

The main purpose of this study was to assess the current educational programming being offered to young and adult farmers in Iowa. This assessment centered on what program areas were being offered, the degree of importance, and the quality of these programs as perceived by young and adult farmers in Iowa. Additionally, the study was conducted to determine areas of interest for further education and to determine the source of information most used by young and adult farmers.

Data were collected by self-administered mail questionnaires sent to a randomly selected group of young and adult farmers (n= 300) who had attended adult education programs during the year prior to the study. There was a 52% response rate. The questionnaire was developed with the assistance of extension professionals and teacher educators. Topic areas focused on livestock and crop

production, agricultural mechanics, horticulture, and general agriculture. Each respondent was to rate (using a five point Likert scale) the degree of importance, quality, and interest regarding each topic. Respondents also rated their primary sources of information.

The findings from this study indicated that farmers placed a very high priority on educational programs on marketing, credit and financial planning. The program area of greatest interest was crop marketing. The lowest rated interest areas were surveying, concrete and masonry, safety, vegetable production, fruit production and turf management. The respondents indicated that the following sources of new information were the most important to them: magazines, friends and neighbors, radio, and newspapers. The information collected through this study underscores a major shift in adult education from an emphasis on increasing production of crops and livestock to an emphasis on management, planning, and marketing.

Martin, R. A. (1986). Perceptions regarding planning and educating for diversified agricultural production in Iowa. Staff Study. Iowa State University, Ames.

The main purpose of this study was to identify current perceptions and attitudes of Iowans regarding diversification of the agricultural production industry. In addition, the study attempted to identify new crops and livestock enterprises for Iowa and assess the perceived need for education in diversification of agricultural production.

Data were collected by self-administered mail questionnaires sent to a randomly selected group of agricultural extension specialists (50), vocational agriculture teachers (50), and young/adult farmers in Iowa (50). There was a 90% response rate. The questionnaire was developed utilizing the assistance of selected agricultural extension specialists and educators not included in the sample. The response mode of the survey instrument used a five point Likert scale. Means, standard deviations and one-way analysis of variance were used to analyze the data.

The findings from this study indicated that there was a need for studying diversification of agricultural production in Iowa. There does not appear to be enough information available to make informed decisions about diversification of crops and livestock in Iowa. Respondents fully supported development of educational programs on diversification of crops and livestock enterprises especially if these programs focused on technical information, practical skills,

planning, resource analysis, profit potential, marketing, enterprose selection, least-cost analysis, budgeting and setting goals. The results of this study underscore the need for further research on and education about a variety of crop and livestock options available to producers in Iowa.

Morris, T. L. (1986). Values instruction in Iowa vocational agriculture programs. Master of Science thesis, Iowa State University, Ames.

The purpose of this study was to determine the perceptions of Iowa vocational agriculture teachers about value enhancement instruction in their vocational agriculture programs. Questionnaires were sent to 127 randomly selected vocational agriculture instructors from Iowa. Eighty-five responses were received by the investigator. Respondents were directed to rate the perceived importance and emphasis placed on teaching sixteen different values using a 1 (no importance or emphasis) to 99 (utmost importance or emphasis) point scale. A reliability test was conducted on the importance and emphasis values statements. Alpha scores were .92 for the importance statements and .95 for the emphasis statements.

The mean for the item, "developing in the student a sense of spiritual fulfillment" was the lowest in both importance and emphasis. "Developing a sense of honesty," "developing self-confidence in students about their own ability," and "developing the studen's ability to cooperate with others' were rated highest for both importance and emphasis. A paired T-test was conducted on the means of each item in the importance and the emphasis section. Each of the items were significantly different at the .01 level from its counterpart in the other section. Respondents felt it was more important to teach values than they were emphasizing them in their programs.

Scofield, G. G. (1986). Perceptions of 4-H leader qualifications. Master of Science thesis. Iowa State University, Ames.

The purpose of this study was to determine the leader qualifications of volunteer adult 4-H leaders. Specific objectives were to: (1) identify perceptions of volunteer adult 4-H leaders about the qualifications needed by 4-H leaders, (2) determine factors that influenced leaders to become involved in 4-H work as a leader, and (3) determine the training needs of volunteer adult leaders.

Two hundred volunteer 4-H leaders from nine central Iowa counties were surveyed to discover their background and training needs.

Factors that influenced respondents to become leaders were: (1) knowing that 4-H is important, (2) knowing the 4-H program is needed, and (3) their children desired to be in 4-H. The four most important leader qualifications were: (1) understanding leader duties, (2) understanding the characteristics of youth--their needs and interests, (3) obtaining and maintaining parent cooperation, and (4) knowing what teaching materials are available. The two factors that most influenced respondents to become 4-H leaders were knowing that 4-H is important and knowing that the 4-H program is needed.

Williams, J. Q. (1986). Perceptions of limited-resource farmers toward the North Carolina Agricultural Extension Service Farm Opportunity Program. Doctor of Philosophy dissertation. Iowa State University, Ames.

The purpose of this study was to determine perceived benefits farmers received from the Farm Opportunities Program, to identify improvements farmers made in their operations, and to test relationships between farming improvements and perceived benefits.

The population of the study was comprosed of 167 limited-resource farmers who were participants of the Farm Opportunities Program and living in Franklin, Vance, and Warren Counties of North Carolina. A personal interview technique was used to collect data from a random sampl of 40 farmers. A five-point Likert-type scale was used to collect information on agricultural assistance farmers received, farming improvements, and perceived benefits from the Farm Opportunities Program.

Major findings of the study were: (1) family and friends were the major sources of agricultural assistance farmers received other than the Farm Opportunities Program. (2) Farmers perceived they made slightly less than average improvements in their farmin practices and situations. (3) In general, farmers perceived they received above average benefits from information pertaining to the production of cash crops and little benefits regarding raising farm animals, obtaining operating capital from gross farm sales, and gaining marketing skills. (4) Only slight and negligible relationships were observed between farming improvements and perceived benefits farmers received from the Farm Opportunities Program.

Williams, M. L. (1986). Perceived educational benefits of showing livestock. Master of Science thesis. Iowa State University, Ames.

The objectives of this study were to: (1) determine the benefits from showing livestock as expressed by vocational agriculture students, parents, and vocational agriculture teachers, (2) determine the differences in perceived benefits from showing livestock as expressed by the respondent groups, and (3) determine the differences in perceived benefits from showing livestock when grouped according to demographic factors.

The sample studied included students who had participated in the Iowa State Fair Livestock Show from 1981 to 1985, the parents of those students, and a representative sample of Iowa vocational agriculture teachers. Data were obtained by a questionnaire. A response rate of 75.4% was obtained. Using Cronbach's test for reliability, a .95 reliability alpha was derived for the data collection instrument.

No signficiant differences were found between the participants' home location or the type of residence in whch they lived and educational benefits from showing livestock. All three respondent groups indicated more educational benefit from skills in the affective domain and much educational benefit derived from showing livestock. Teachers attitudes concerning paying above-average prices for feeder and champion animals was less favorable than were those of parents or students, however both parents and teachers felt that paying above average prices had a negative influence on the showing of livestock. As teachers' tenure increased, the educational benefits gained from showing of livestock decreased. Significant differences were found between the number of hours devoted to showing within one year and the educational benefits gained from the showing of livestock.

LOUISIANA

Johnson, R. K. (1985). Characteristics of High School Dropouts in Acadia Parish. Masters thesis. Louisiana State University, Baton Rouge.

The purpose of this study was to develop an instrument to assess the characteristics of dropouts and their reasons for dropping out and to make these assessments for high school dropouts in Acadia Parish, LA in order to discover possible causes for their leaving school.

The descriptive method using the survey technique was the research procedure followed. Data was obtained from the dropouts themselves through questionnaires. A random sample of 100 high school dropouts from Acadia parish were selected for the study. Forty-one percent of the dropouts responded to the questionnaire.

Dropouts included males and females of various ages, the majority of them quitting school during the first two years of high school.

Respondents indicated their major reason for dropping out of high school was that their process towards graduation was too slow. The major influence which may have kept students from dropping out was their desire for more interesting classes.

It was concluded that high school dropouts in Acadia parish possess characteristics which are indeed similar and it is recommended that educators, guidance counselors, teachers, and administrators work together in each local school system to counsel their students prior to their deciding to dropout of high school.

Kotrlik, J. W. (1986). Attitudes held by vocational agriculture teachers towards FFA proficiency awards. Staff study. Louisiana State University, Baton Rouge.

The purpose of this study was to assess vocational agriculture teachers' attitudes toward the FFA proficiency award program and to determine what factors are related to whether a teacher had students to apply for these awards. A questionnaire was developed based on a review of the literature. Reliability estimates were calculated for the two scales in the questionnaire using Cronbach's Alpha, yielding estimates of r = .89 and .92.

The two populations used in the study included all vocational agriculture teachers who did or did not have students to apply for FFA proficiency awards during 1985; All 39 teachers who had students to apply were surveyed and 100% responded; 84.1% (106 of 126) of the teachers in the sample who did not have students to apply responded.

The alpha level was preset at .01. Descriptive statistics, multiple regression and one sample t-tests were used to analyze the data.

Teachers who had students apply were more likely to perceive that proficiency awards (a) help students to learn skills, (b) motivate students, (c) result in favorable local publicity, (d) provide opportunity for recognition of student achievement, and (e) results in improved self-concept for the students.

It was concluded that: Teachers who had students apply had more positive attitudes toward the proficiency award program than those who did not; The quality of student SOE projects and knowledge of how to fill out the award applications may be factors that resulted in teachers failing to have students to apply for the awards; and, The likelihood of a teachers have students to apply increased slightly as the number of teachers in a department and the number of years teaching experience increased.

Kotrlik, J. W., & Drueckhammer, D. (1985). Vocational agriculture for the year 2000. Staff study. Louisiana State University, Baton Rouge, and University of Southwestern Louisiana, Lafayette.

The purpose of this study was to determine vocational agriculture teachers' opinions of the direction that vocational agriculture programs should take in the future.

A closed-form questionnaire was developed based on a review of the literature. The instrument was field tested and revised based on the results of the field test. Reliability was assessed for the two scales in the instrument using Cronbach's Alpha and yield estimates of r = .91 and .92.

The population consisted of all high school vocational agriculture teachers in the nation. A return rate of 84.4% (211) was realized after two mailouts and a phone follow-up to the sample of 250 teachers.

The data were analyzed using descriptive statistics, factor analysis and inferential t-tests. The alpha level was preset at .01.

It was concluded that: Program components related to the FFA are not highly important components of vocational agriculture programs of the future when compared to the other components addressed; State and federal supervision of programs is a moderately important factor in insuring that programs of the future will be quality programs when compared to others addressed in the study; Teacher quality and funding are the two most important factors in insuring quality programs in the future; and, Teachers

opinions of the factors that are important in insuring quality programs in the future do not differ according to contract length, community size and number of teachers in the department.

Miller, C. (1985). Microcomputer use in vocational agriculture programs in the United States. Masters thesis. Louisiana State University, Baton Rouge.

The purpose of this study was to determine the competencies deemed most important for practical microcomputer use by secondary vocational agriculture teachers in the United States and to determine the current uses of microcomputers. The population (N = 12,500) consisted of all secondary vocational agriculture teachers in the United States. Of the 312 teachers in the sample, 212 responded after two mailings and a phone follow-up for a return rate of 68.4%.

A questionnaire based on instruments developed by Dean Sutphin et al. (1984), and by Hudson (1983) was developed. The instrument was field tested and revised. Instrument reliability was assessed using Cronbach's Alpha and resulted in estimates of r = .91 and .86 for the two scales in the instrument.

Data were analyzed using descriptive statistics and inferential t-tests. The alpha level was preset at .01.

It was concluded that: The percentage of teachers who have computers in their departments does not appear to be as high as the percentage reported by the National FFA Agricultural Computing Service; Vocational agriculture teachers were more likely to have computers if the principal and school board supported the use of computers; Computers currently in vocational agriculture departments are used more for instructional management than they are for tutorial or direct instructional purposes; Most departments had either Apple or TRS-80 computers; and, The use of microcomputers is still in its infancy stage as evidenced by the low number of departments with computers and the low level of usage of the computers for program management and instructional purposes.

Schafer, S. R. (1985). Factors affecting farm safety practices of farmers. Masters thesis. Louisiana State University, Baton Rouge.

The purpose of this study was to identify and evaluate Beauregard Parish farmer's safety practices and to determine if

relationships existed between the farmers' safety practices, and selected personal characteristics and farming situations.

Data was obtained by personal interviews with 154 out of the 926 farmers in Beauregard Parish, Louisiana, who were in production in 1983-1984. The instrument was developed based on a review of the literature and with the assistance of three farm safety experts. It was field tested with farmers in adjoining parishes. Weights used for the farm safety score were developed by the three farm safety experts.

The data were analyzed using descriptive statistics and multiple regression. The alpha level was preset at .05.

Farmers income (over $33,000) and acreage (over 175 acres) were found to be statistically significant predictors of the farm safety practices used by farmers.

A positive correlation was found between what the farmer's own feelings were concerning his knowledge and usage of recommended farm safety practices, and the actual use of these safety practices.

Participation in a farm safety program also demonstrated a very positive effect on the usage of recommended farm safety practices. The safety index score mean for farmers who had attended a farm safety program was significantly higher than the score for those who had not attended.

The Extension Service, farm safety organizations and other farm safety professionals should direct their efforts at those farmers and farming situations exhibiting characteristics of lower usage of farm safety practices, as indicated by this study. They should also continue to emphasize the use of farm safety practices by all farmers.

Venable, G. P. (1985). Occupational Aspirations of Third Year Vocational Agriculture Students in Louisiana. Masters thesis. Louisiana State University.

The purpose of this study was to determine the occupational aspirations of third year vocational agriculture students in Louisiana.

Data for this study were obtained through questionnaires given to 30 vocational agriculture departments, selected at random through stratified cluster sampling. Twenty-three of 30 schools and 366 students responded to the study giving a response rate of 77%. Responses of vocational agriculture students were examined and various conclusions drawn.

No significant relationships were found between the following variables: (1) vocational agriculture teacher support of students continuing their education and years of FFA membership; (2) students' educational plans and their career objective; (3) students' career objective and the availability of career

information in their high school; and (4) educational plans of the students and the availability of career information in their high school.

Vocational agriculture students rated the top five courses taken in high school that bore an influence on their educational and occupational plans. Indications were that vocational agriculture was most influential.

Upon indicating their reasons for enrolling in vocational agriculture, 53% of the students said they had an interest in an agricultural field.

The mother and father were rated as the two most influential people toward the vocational agriculture students' educational and occupational plans.

Based on the findings of the study, the author recommends that the vocational agriculture teachers make use of Supervised Occupational Experience Project visits with students and parents in order to make them aware of career opportunities available in agriculture.

MARYLAND

Beavan, R.A. & Cooper, E.L. (1986). An employment survey of agribusinesses in Frederick County Maryland. Master of Science Thesis, The University of Maryland, College Park.

The purpose of this study was to determine employment and competency needs of agricultural businesses in Frederick County Maryland. This study was necessary to determine the major products or services being supplied by agricultural businesses and the number of employees using agricultural competencies in Frederick County Maryland. It sought to determine the number of workers now employed, full or part time, and the number needed in one and five years from the present.

The study utilized a mail survey, with telephone follow-up, to 294 agribusinesses in Frederick County Maryland. The returned surveys were coded and entered into the main frame computer at the University of Maryland. The information was analyzed by the use of the Statistical Package for the Social Sciences (SPSS) Program.

From the findings of this study, it was concluded that there were an estimated 2,715 current full-time and part-time workers in Frederick County needing agricultural competencies. Also, there was a reported need for 705 full-time and part-time current replacement workers. In addition, there was a projected need for 3,549 full-time and part-time workers in five years.

It was concluded that the agribusiness employers were generally satisfied with the attitudes and competency levels of their employees. The data also indicated that most employees have not had vocational agriculture while in high school. It was also found that some employers would like to employ students with backgrounds in vocational agriculture if they could find them.

Crawford, D.S. & Cooper, E.L. (1986). Agricultural education: Before and after Public Law 88-210, the Vocational Education Act of 1963. Docotor of Philosophy Dissertation, The University of Maryland, College Park.

The purpose of this study was to examine and analyze the impact of Public Law 88-210, the Vocational Education Act of 1963, on agricultural education. The methodology employed in the study was traditional historical research techniques.

The objectives of the study were to: (1) develop a chronology of federal legislation affecting agricultural education preceeding the enactment of the Vocational Education Act of 1963, (2) develop a profile of vocational agriculture programs offered prior to and

subsequent to the enactment of the Vocational Education Act of 1963, (3) identify needed modifications in legislation affecting agricultural education that was enacted prior to 1963, (4) identify the need for the new legislation, (5) analyze the provisions of the Vocational Education Act of 1963 which had an impact on agricultural education, and (6) analyze the impact of the Vocational Education Act of 1963 on the nature and success of programs in vocational agriculture.

The emphasis of the Vocational Education Act of 1963 was on providing and improving general job skills for youth and adults, not on preparing them for specific occupations. The act broadened and expanded programs offered in vocational agriculture in the public schools of the United States to include training of students in off-farm agriculturally related occupations. The act encouraged the enrollment of students not previously served in agriculture programs, such as females, students with certain special needs, students with non-farm backgrounds, and students in urban areas. The act greatly increased funding for agricultural education and placed emphasis on program development based on research. In addition, the act created the need for revision of the membership requirements, and contest and award programs in the Future Farmers of America.

Simpson, D.W. & Nelson, C.L. (1985). American Institute of Cooperation member perceptions concerning target audience priorities, provider preferences, and educational methodology for cooperative education. Masters thesis. The University of Maryland, College Park.

The purpose of this study was to provide U.S. cooperatives and cooperative educators with a clearer understanding of the perception of agricultural cooperatives concerning cooperative education. More specifically, the study was designed to provide guidance to the American Institute of Cooperation in designing educational programs and services that reflect the needs of specific clientele groups.

The survey attempted to identify cooperatives' educational needs including target audiences for cooperative education, who should be educating these audiences, and the role of AIC in cooperative education.

The findings come from a stratified random mail survey of 8,150 cooperatives. Questionnaires went to 1,776 cooperatives. Nearly 36 percent or 635 cooperatives responded.

The data were analyzed with the Statistical Analysis System (SAS) software. Weighted averages were obtained by summing the weighted responses and divided by the total number of responses.

Statistically significant differences, at the 5 percent confidence level were established by using the t-test calculation in the SAS program.

It was found that cooperatives considered young farmers, legislators, directors, members, employees, and managers in order to be the most important target audience for cooperative education.

It was also found that respondents discriminated significantly when asked to identify which organization should be major providers of cooperative education to specific target audiences. Generally, the cooperative and state councils were identified as major providers for internal audiences while AIC, Agricultural Cooperative Service and the Extension Service were preferred for external audience.

Educational activities receiving highest priority for AIC were educational materials development, coordination of educational efforts and promoting cooperatives.

The most preferred methodology was educational materials. This delivery method was rated most effective by more than 50 percent of all respondents for all activities except director certification, international development and management training.

Since a majority of all respondents indicated the need for at least some changes in AIC it was concluded that any future planning be done using the results of this study as a guideline.

MICHIGAN

Akor, Alexander J. (1986). Factors associated with the acceptance and rejection of the "Picking Knife" as an appropriate oil palm harvesting devise in Rivers State, Nigeria. Ph.D. Dissertation, Michigan State University, East Lansing.

Previous studies about oil palm harvesting especially in Rivers State, Nigeria, have been focused almost exclusively towards the development of mechanical devices, genetic height reduction and attributes of the first bunch. This study was directed toward the factors associated with adoption and rejection of the picking knife for harvesting oil palm.

The picking knife seemed to have all the desirable qualities for an oil palm harvesting device in the Rivers State situation, but had not been accepted to a high degree by the oil palm operators. The problem, therefore, was to identify those factors that were associated with the adoption of the picking knife as an appropriate oil palm harvesting device.

The identification and analysis of the factors associated with the adoption of the knife in the Rivers State was done by using the innovation-decision and social theory (a case study). Data were collected through personal interviews with operators, some of whom had never used the knife, as well as users and ex-users. An intensive description of the operators and their social institutions in the Rivers State was prepared along with the analysis and interpretation of the responses.

The factors identified were categorized into attributes of knife, individual characteristics of operators (e.g., age, education, experience), and situation.

The interrelationship between the social system, the operators' occupational biases, the historical heritage of the operators and the geographical influence on the adoption of the knife were discussed. A comparison between the Rivers State situation with that of Nigerian Institute for Oil Palm Research (NIFOR) and Malaysia showed some similarities and major differences in the interrelationship of factors and the social and historical setting. Most of the factors identified were more serious in the Rivers State than in NIFOR.

Finally, conclusions were drawn and recommendations made for incorporating the findings in programs aimed at adoption of the knife and for further research work in this area.

Bobbitt, Frank. An Examination of the Opinions and Supervised Occupational Experience Programs of Selected Vocational Agriculture Instructors in the U.S. Staff Study, 1986, Michigan State University, East Lansing.

Purpose. The study was conducted to determine what the status of the supervised occupational experience program among secondary agricultural instructors who were identified as some of the best instructors in the U.S. Of particular interest was the relative role the three primary options for obtaining supervised occupational experience, i.e. (1) supervised farming, (2) placement and (3) school land laboratory, played in these selected programs.

Method. A random sample of 16 states were selected to be in the study. State supervisors of agricultural education and agricultural teacher educators were asked to identify five teachers in their state with the best supervised occupational experience program. A questionnaire was developed and submitted to a panel of agricultural educators to establish the validity of the instrument. A reliability coefficient of .80 was also established for the instrument. The questionnaire was mailed to 73 teachers who had been identified. After a follow up mailing a response rate of 80.5 percent was obtained. The data was analyzed using the Stat Pac statistical analysis program.

Findings. There were differences in the extent that students were involved in supervised occupational experience (SOE) programs. Only 84 percent of ninth graders, 92 percent of tenth and twelfth graders and 96 percent of eleventh graders had students selecting it for their SOE. Forty seven percent of the twelfth graders were using the supervised farming option, 36% were in placement programs and 9% were in school land laboratories. All three SOE options were widely used in agricultural programs. However, teachers in different localities, i.e. rural, suburban and urban, utilized different types of SOE. Teachers of different age groups and teaching experience seem to emphasize different types of SOE for their students.

Information. For additional information contact: Dr. Frank Bobbitt, Professor, Agricultural and Extension Education, 410 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824, Telephone: 517-355-6580.

Steele, Roger E. Factors Affecting Practical Agricultural Training Experiences for Graduate Students from Developing Countries. Doctoral Dissertation, 1986, Michigan State University, East Lansing.

Purpose. Many universities in the United States, particularly the land grant institutions, have prided themselves on providing practical and relevant training for students, regardless of nationality or background. Consequently, there is an awareness among some educators of the need to be active in monitoring the practical aspects of educational experiences. This study was designed as a response to the need identified by international students for more experiential learning opportunities. Practical agricultural training experiences were defined as the training that a student receives through a jointly designed, monitored, and evaluated program in conjunction with the academic advisor and members of an agricultural community in the United States.

Methods. Five groups were identified from within a strategically selected survey population in Michigan: (1) graduate students from developing countries enrolled in agriculture programs, (2) faculty advisors, (3) Cooperative Extension Service (CES) field agents, (4) county extension directors (CEDs), and (5) Vocational Agriculture (Vo-Ag) instructors. Attitudes toward various aspects, problems, terms, and conditions related to practical experiences were measured on a mail questionnaire.

Findings. Analysis of the data indicated that each respondent group demonstrated a positive attitude toward practical training experiences. The faculty respondents demonstrated the least positive attitude and the student respondents the most positive attitude toward practical experiences. In addition, members of all groups agreed that students would receive the most benefit and the host community would receive the least benefit from participation in practical training experiences. It was concluded that potential hosts of an experience in an agricultural community should be made aware of benefits they could receive through involvement in a practical experience.

It was also concluded that securing involvement of faculty advisors in facilitating practical experiences for their international student advisees will be more problematic than has been suggested in recent literature. One possible implication emerging from this study was that the land grant philosophy, as currently understood and practiced by by faculty respondents, does not necessarily embrace the principle of experiential education. As a result, it was recommended that faculty understanding and implementation of the land grant philosophy, especially the relationship between the theoretical and practical aspects of education, be investigated through future research.

Information. Contact: Dr. Roger E. Steele, Department of Agricultural and Extension Education, 410 Agriculture Hall, East Lansing, Michigan 48824, Telephone: (517) 355-6580.

Wallace, Donald R. (1986). Impact of the Minority Apprenticeship Program Experience on Selection of a Major Preference in the College of Agriculture and Natural Resources by Minority Freshman at Michigan State University. Ph.D. Dissertation, Michigan State University, East Lansing.

Purpose. The purpose of this study was to identify the impact participation in the Minority Apprenticeship Program (MAP) had on minority youth and their choice of a major preference when enrolling at Michigan State University, as well as providing information to outside interests that might facilitate development of similar programs. Emphasis was given to the students' choice of a major prior to MAP participation and the changes in their choice after MAP participation, if any. The objectives of the study were to: (1) develop a historical background of minority participation in agricultural education opportunities within the post-secondary agricultural system; (2) determine the impact participation in the Minority Apprenticeship Program had on the selection of a major preference of those MAP participants entering college during Fall 1985; and (3) determine the impact participation in MAP had on the selection of a major preference of those MAP participants who returned to high school and would be entering college Fall 1986.

Method. Over two hundred junior and senior, male and female, minority high school students applied for the 1985 MAP Program by February 1, 1985. One-hundred seventy-eight were selected for interviews and were included in the study. They were divided into two groups: (1) minority students selected to participate in the 1985 MAP Program: and (2) minority students selected to serve as alternates to replace any student chosen as a participate but who did not accept. The students were classified as "Participant" or "Alternate" based on actual completion of the 1985 MAP experience. Data for the study were gathered during the initial interview and post-MAP survey. The two groups were compared by use of the chi-square technique.

Findings. Over forty percent of the minority students who participated in the 1985 Minority Apprenticeship Program chose a major preference in agriculture and natural resources by the end of their second term at Michigan State University or selected a major preference in agriculture and natural resources when applying for admission for Fall Term 1986. The percentages were similar for males, females, high school juniors, or high school seniors. The MAP experience appears to provide an awareness of agricultural and natural resource careers and generate an interest in pursuing a major within the programs available in the College of Agriculture and Natural Resources, Michigan State University.

Students in the Alternate Group indicated no interest in pursuing agricultural and natural resource careers. The interest does not vary in either the case of sex or the year in school.

Students in both the Participant Group and the Alternate Group had similar backgrounds. Academic achievement, sex, year in school, community, or ethnic background were not factors in the students selection into the Participant Group nor were they factors in the students choice of a major preference.

Information. Contact: Dr. Donald R. Wallace, College of Agriculture and Natural Resources, 121 Agriculture Hall, East Lansing, Michigan 48824, Telephone (517) 353-3225.

MINNESOTA

Appel, T.D. (1986). Factors affecting local participation of Minnesota Future Farmer of America chapter members. Master of Arts, University of Minnesota, St. Paul.

The primary purpose of this study was to determine which factors affect the local participation level of Minnesota Future Farmers of America chapter members.

The participants in this study included 47 FFA Advisors and 350 vocational agriculture students from eight Minnesota schools. The student sample was stratified by clusters as follows: one school-two advisors-95% FFA membership, one school-two advisors-70% or less FFA membership, three schools-one advisor-100% FFA membership, and three schools-one advisor-65% or less FFA membership.

The primary method of research was descriptive survey research which involved the development of two questionnaires: an advisor survey and student survey.

The following conclusions were drawn: 1. Female vocational agriculture enrollment and FFA membership remained relatively low in comparison to male enrollment and FFA membership. 2. Chapter size of 51-75 members appeared optimal for participation in 11 or more contests. 3. Chapters holding meetings before, during and after school had the highest contest participation. 4. Schools with year long and year long combination courses had the highest percentage of membership, participated in the highest mean number of contests and involved the highest mean number of FFA members in contests. 5. Members of chapters with 100% membership reported more hours of FFA participation and were involved to a greater extent in supervised occupational experience programs than members of 65% or less membership chapters. 6. FFA members had a higher level of involvement in community, school and work than non-members.

Beckman, I.L. (1986). An agribusiness management sample problem. Master of Education, University of Minnesota, St. Paul.

The problem for this study was to build an agribusiness management accounting problem that can be used effectively in the high school agriculture curriculum.

An agricultural supply store grossing over $660,000 per year in nine separate departments was the data source. The inventories, along with the monthly receipts and expenses were compiled. The Minnesota Small Business Management program analysis was done.

A study of the completed business analysis is a recommended task for instructors. Students should be shown how each table in this analysis can be a valuable tool in the business decision making process.

Crom, R. (1986). Implications of preferences found in the learning and teaching styles of 4-H members and adult volunteers. Master of Education, University of Minnesota, St. Paul.

The purpose of this study was to determine the relationship between learning styles of 4-H members and teaching styles of 4-H adult volunteers. Additionally, the conceptual levels of 4-H members was studied in relationship to the environment that facilitates the most learning. Seventy-one 4-H members between the ages of 12-19 and 26 adult volunteers from Itasca and Jackson Counties were given the following inventories: Kolb Learning Style Inventory, Gregorc Teaching Style Inventory, and Hunt Conceptual Level Model. The responses were tabulated for each inventory, percentiles were determined for both the Kolb and Gregorc inventories. The following conclusions were drawn: 1. 4-H volunteers prefer to teach the way they learn, 2. Seventy-six percent of 4-H members preferred a highly structured environment, 3. The inventory members preferred a highly structured environment, and 4. The inventory provides agents with an understanding of various learning and teaching styles. The implication is that 4-H and Youth programs should provide an educational environment that lends itself to all conditions under which member learn. 4-H educators need to be aware of these preferences, so that members can learn more efficiently.

Leske, G.W., Casey, M.A., & Legried, C. (1986) Farm financial management resource units. Bremmer Foundation grant, Staff study, University of Minnesota, St. Paul.

The purpose of this effort was to develop farm financial management resource materials for agricultural educators. The format for each unit was: objectives, transition of units, attention focuser, lesson, summary, list of resources needed, list of references, and appendices (materials for use in teaching). The units developed were: financial records needed, balance sheet and net worth, income statement, ratio analysis--balance sheet, ratio analysis--income statement, budgeting, cash flow statement and analysis, tax management, credit, leasing, land acquisition, machinery management, and risk management. High school, young farmer, and limited experience adult farm management instructors are the target audience.

Liu, P.Y. (1986). Strengthening agricultural technical service: a key to further development of agriculture in China. Master of Arts, University of Minnesota, St. Paul.

This paper examines the agricultural technical services provided by the communities, schools, colleges and governments of the Peoples Republic of China. Based upon the current literature of China about technical services and the personal experiences of the author, the paper is developed around the logical framework that identifies

problems in agriculture, reviews the current situation and extends suggestions for reformation. It focuses on agricultural research, agricultural education and extension.

While agriculture in China has made tremendous strides in improving production and the economic wellbeing of producers, the problems have not been solved. Most of the gains can be attributed to changes in policy that improved the reward system and thus sparked enthusiasm for innovation and hard work. The systems for providing technical services (research, formal education and extension) have not been appropriately adjusted to improve the education of persons with agricultural ability. The paper cites many examples of activities that have been tried to improve the education of agricultural producers and improve the productivity of agriculture - most of them very successful - but cites the gaps between the problems as they have been identified and the current accepted system of program operation.

To fill the gaps the author elaborates on three key suggestions to improve the delivery of agricultural technical service (a) interdisciplinary research efforts to bring a disciplined approach to the wider environment of agriculture through research methods and approaches that can deal with complex real problems.(b) adjustments in the structure of education in agriculture to respond more directly to the needs of the production communities and (c) adjustments in the roles of key agricultural universities to give greater emphasis to the training and development of a cadre of professional extension workers.

Maland, J. (1986). Determinants of University of Minnesota faculty participation in international development projects. Master of Arts, University of Minnesota, St. Paul.

The effective involvement of universities in technical assistance projects is dependent on the active participation of faculty who are qualified and interested in working in the international arena. This study's purpose was to identify (a) the percentage of faculty interested in working overseas on assignments of varied lengths, (b) the degree to which willingness to participate was affected by such variables as age, gender, tenure status, current position, work location on/off campus, foreign language capabilities and previous international experience, (c) the influence of various personal, professional and project related factors on willingness to participate on an international project, (d) the degree to which those factors are dependent on the previously mentioned demographic variables, and (e) the extent to which influencing factors were rated differently for short, medium or long term assignments. The sample of 300 was randomly chosen from the population of faculty, on and off campus, with academic appointments in the Institute of Agriculture, Forestry and Home Economics. This includes extension appointments. A questionnaire was used to elicit responses pertaining to demographic information, international interests and previous international experience, and the influence of personal, professional and project- related factors on willingness to participate in international projects. Descriptive statistics, analysis of variance and t-tests analyses were conducted. Results indicate that there is a high degree of interest in international development activities but that this interest declines as

the length of assignment increases. Significant differences were identified in the ratings of the influencing factors analyzed by demographic variables, most significantly with gender and work location. Analysis also revealed a significant gap between the interest and experience of both younger faculty and women. While willingness to participate is similar to that of older male faculty, the international experience of the younger faculty and women is severely limited.

Ngware, S.S.E. (1986) Agricultural policy and economic crisis: the case of Tanzania, 1975-1985. Master of Arts, University of Minnesota, St. Paul.

The main purpose of the study was to find the most reasonable explanation for Tanzania's economic crisis particularly in the agricultural sector. The country's policy and implementation on production, institutions, agricultural parastatals, marketing and incentive structure and supportive physical and social infrastructure were examined in detail.

The major objectives were: (a) to make a critical analysis of Tanzania's agricultural policy and its implementation - an analysis which goes beyond the official government explanation on the agricultural crisis, (b) to demonstrate the dialectical link between Tanzania's current economic difficulties and the crisis in agriculture, and (c) to make practical policy recommendations for economic and agricultural policies.

The study method involved (a) intensive review of literature dealing with Third World Countries in general and Tanzania in particular and (b) interviews with distinguished personalities and scholars with relevant experience and knowledge about international agriculture, Africa and Tanzania.

The study demonstrated the necessity for government policy to be carefully followed by practical implementation.

Perera, I.R. (1986). Behavior and attitude change of Galoya farmers as a result of the Galoya farmer organization program in Galoya Sri Lanka. Master of Arts, University of Minnesota, St. Paul.

Sri Lanka is a tropical country whose production agriculture is highly dependent upon water control and conservation practices. The efficiency of its irrigation system is dependent, in part, upon the success of the Galoya Farmer Organization Program in organizing farmers for the purpose of working toward common goals relative to the system. This study served as an evaluation of the organization program.

A qualitative evaluation of regular reports of field-level program personnel was done to identify program strengths and weaknesses and to identify pre- and post-project differences in farmer behavior and attitudes relative to the program. A quantitative evaluation by mail questionnaires to farmer participants was conducted to provide evidence of the program's effectiveness.

Findings indicated that farmer attitudes and behaviors were positively affected as a result of the program.

Peterson, R.L., Thomas, R.G., Anderson, J.J., & Rabideau, R. (1986) Access to educational opportunity in rural communities: alternative patterns of delivering vocational education in sparsely populated areas. Volume 4 Interdistrict cooperative center--a centralized center. Agricultural experiment station bulletin Ad-SB-2852 University of Minnesota, St. Paul.

The central focus of this study was to gain knowledge of the interdistrict cooperative center with courses offered in a central location.

The case study method was used. The researchers interviewed school administrators, teachers, students, school board members, advisory committee members, counselors, parents and various business personnel from the cooperative district. The center was relatively inflexible and required students to travel. Schools did not feel strong ownership of the programs. Financial incentives to cooperation were limited.

Thomas, R.G., Peterson, R.L. & Anderson, M.J. (1986). Access to educational opportunities in rural communities: alternative patterns of delivering areas. Volume 2: The Heartland Vocational Center--a decentralized center. Agricultural experiment station bulletin AD-SB2714 University of Minnesota, St. Paul.

The central focus of this study was to gain knowledge of a decentralized center pattern for delivering vocational agriculture programs to sparsely populated rural areas. The Heartland Center was located in Pine River, Minnesota. The other center school was Backus.

The case study method used three investigators for three days. School administrators, teachers, students, school board members, advisory committee members, counselors and parents were interviewed.

The decentralized center allows for curriculum expansion but access is limited because students must travel. The decentralized pattern seemed to be the "middle of the road" model, possessing both the disadvantages and advantages of the centralized center and noncenter models.

Thomas, R.G., Peterson, R.L. & Rabideau, R. (1986). Access to educational opportunities in rural communities: alternative patterns of delivering vocational education in sparsely populated areas. Volume 5: The Clay-Wayne County agreement--a decentralized noncenter bulletin. AD-SB-2715. University of Minnesota, St. Paul.

The focus of this study was to examine the effectiveness of the decentralized noncenter agreement functioning between 5 school districts in Southern Illinois. The joint agreement system was used to provide vocational programs in sparsely populated rural areas.

The case study method was used. Three investigators spent three days interviewing school administrators, teachers, students, advisory committee members, school board members, counselors, parents and state education agency personnel.

Individualized districts had direct control and independent financial functions. School individuality was very apparent. Each school shared at least one program. The strengths were reasonable costs plus the ease of expansion. The weaknesses were a lack of leadership and student travel.

Wardlow, G.W. (1986). The teaching performance of graduates of teacher education programs in vocational and technical education and their decision to teach. Staff paper, University of Minnesota, St. Paul.

The issue of teacher competence has received much attention in the current education excellence movement. The abilities of graduates of teacher education programs in vocational and technical education may also be in question.

This study sought to describe the teaching performance of graduates of vocational teacher education programs at the University of Minnesota during their student teaching experiences relative to graduates of other teacher education programs. Student teachers were evaluated by their University supervisors on 50 items which reflect general teaching skills.

Fifty-nine vocational and technical teacher education graduates were compared with a population of 465 graduates of all teacher education programs over a two year period. The study found that the vocational and technical education group earned significantly higher ratings on 22 of the 50 items and was found not to rate significantly different on the ramaining items. Further, when those vocational and technical teacher education graduates who subsequently entered teaching were compared with those who did not enter teaching, no significant differences were found on 43 of the 50 items, and for the remaining 7 items, the teaching group earned higher scores.

Mississippi

Cheatham, D. L., Tisdale, J. F., Smith, W. K., Dorris, K. B., & Morgan, K. R. (1986). A profile of program development efforts. Special-Needs Project Funded By 4-H, ES-USDA. Mississippi State University, Mississippi State.

The purpose was to identify 4-H program development efforts and models in order to provide baseline data for identifying models depicting knowledge and skills required for effective program development.

The population for this national study consisted of both a primary audience of state level 4-H personnel and a secondary audience of county level 4-H personnel with the Cooperative Extension Service.

A survey instrument was developed by using a literature review to compile a list of program development competencies needed by county 4-H staff. Content validation and competency classification were conducted by separate panels of experts. To identify program development models currently being used, a request was included on the survey instrument for copies.

To aid in understanding the data received the following statistical procedures were used: Descriptive statistics, Central tendency data, Duncan's Multiple Range, and Factor Analysis.

The findings showed that significant statistical differences exist between state level 4-H staff and county level 4-H staff with regard to the perception of the county 4-H agent's ability to perform the items, degree of importance of the items, and training needed. Also, most states had and used some type of program development model in planning and developing 4-H educational programs.

Because of the tremendous importance of program development and the differences found between the agents and the state personnel, it is recommended that on-going inservice education be provided to field staff in the area of 4-H program development. Also, state 4-H personnel should communicate with field staff more closely regarding the importance of program development and when planning inservice education activities regarding 4-H program development, both field staff and state 4-H personnel should be involved to insure that prescribed needs as well as felt needs are met.

Deeds, J. P. (1986). Indicators of quality used for faculty selection in departments of agricultural education. Staff study, Mississippi State University, Mississippi State, MS.

This study was to determine which faculty-related variables are most frequently used by agricultural education program adminis-

trators as indicators of quality at the time of employment.

Data were obtained through the use of a mailed questionnaire sent to all individuals identified as chief administrators (CEO's) in the American Association of Teacher Educators in Agriculture Directory.. A 75% response rate was received. The survey conducted in the spring of 1986 used an instrument developed by Moore (1985) which was validated and pilot tested by a panel of experts which included the American Association of Colleges of Teacher Education Board of Directors.

The instrument consisted of 56 indicators of quality clustered into eight categories: academic preparation, professional experience, evidence of scholarship, documentation of teaching effectiveness, personal qualities, service activities, candidates personal professional development and leadership qualities. Cronbach's alpha reliability coefficients varied from .86 to .94 on the eight categories. The indicators each received two responses, importance in the decision making process rated on a five-point scale "essential" (5) to "no value" (1) and rank order of the use of that indicator in hiring from "high" (1) to "low" (6).

The CEO's rated 13 of 56 quality indicators as valuable to essential (mean over 4.0). Personal qualities and documentation of teaching effectiveness as evidenced by supervisor comments and peer/colleague comments carried the most weight.

Using the Kruskel-Wallis one-way ANOVA demographic groups were compared at $P<.05$. CEO's in colleges of agriculture rated supervisor comments as more important than CEO's in colleges of education. CEO's in land-grant institutions rated publications in refereed journals as more valuable in the hiring process than non land-grant.

The personal contacts of the person in charge of hiring along with the search committee recommendations have the greatest effect on the final employment decision.

Encarnacao, Ricardo O. (1986). An analysis of animal waste management legislation with implications for planning educational programs. Master of Science Thesis, Mississippi State University, Mississippi State.

This study examined the legislation of thirty-five states and synthesized the guidelines for manure disposal. The focus of the study was to aggregate the common rules and regulations in the legislation of the thirty-five states, to develop guidelines which will assist educators, and to develop a decision taxonomy which will improve the selection of animal wastes management practices.

This research was conducted as a field study and was based on two sources of information, a literature review and a requesting letter. The information from the thirty-five responding states was practically analyzed.

The guidelines regarding waste management of each state were compiled into resumes which include the same information for each state. The information from the resumes was organized into chart form for easier access.

The data present in both the chart and the resumes were practically analyzed according to the number of required guidelines for each state, the number of states which require each guideline, and a comparison by state. A decision taxonomy of animal waste management was developed to outline techniques which are cost effective and environmentally sound.

No practical relationships appeared when the states' legislations were compared based on demographic similarities and differences. The only slight relationship was found when comparing milk producing states. Regulated areas vary within the large milk producing states. There is often a discrepency between the regulations of small milk producing states and large milk producers. In some areas the two groups were in agreement, and in some areas, they disagreed. Based on a practical analysis, there was no trend of evidence which would allow for generalization of practices among the states even when the states are demographically similar. The data were organized into four easy-to-follow segments to provide educational literature which is convenient to use.

Lawver, D. E. (1986). An evaluation of "New Instructional Materials for Agricultural Education". Department of Agricultural and Extension Education, Mississippi State University, Mississippi State.

The purpose of this evaluation was to determine the extent to which the publication, New Instructional Materials for Agricultural Education (NIMAE), is being used. Specifically, the evaluation sought to answer the following questions: (1) Does the publication accomplish what it is intended to accomplish? (2) Would more effective advertising increase circulation? (3) Is the publication useful to those who use it? (4) Is the publication a repetition of those produced by some states? (5) Should the publication be continued?

A systematic random sample of 367 vocational agriculture programs from states where NIMAE is not distributed free of charge and a systematic random sample of 260 vocational agriculture programs from states where NIMAE is distributed free of charge was selected.

An instrument was constructed by the investigator with input from a panel of experts. A follow-up postcard was sent ten days following the initial mailing to those programs who had not responded. A random sample of nonrespondents were contacted by telephone to determine if the nonrespondents were different than the respondents. No significant difference between nonrespondents

and respondents was found, $X^2(1, N = 230) = .830$, $p < .05$.

Based upon the findings of the study, it was concluded that: (1) most respondents with access to NIMAE believe that it is effective; (2) a minority of respondents believe NIMAE is repetitious of other sources; (3) many respondents have no prior knowledge of NIMAE and many believe advertisement would give the publication better exposure; (4) respondents who use NIMAE believe it is useful; (5) users of NIMAE believe it should be continued; (6) respondents in states where the publication is distributed free of cost report awareness of NIMAE at less than 50%; and (7) many copies of NIMAE have fallen into disuse.

Meadows, M. E. (1986). A survey to determine availability, uses, and informational needs concerning the video cassette recorder of Mississippi secondary agriculture programs. Educational Specialist study, Mississippi State University, Mississippi State.

The purpose of this study was to determine video cassette recorder availability, uses and informational needs in secondary vocational agriculture programs in Mississippi.

The researcher developed survey instrument was mailed to all 200 vocational agriculture departments in Mississippi. Reminder post cards were sent and a sample of non-respondents were followed up by phone and were not significantly different than respondents. The response rate was 46%.

Respondents reported 66% had VCR equipment available for use. The largest percentage (54%) had both play and record capabilities while 12% had equipment that would play prerecorded material only. Most departments reported using the VCR one to three times per month. Sixty-eight departments had access to video equipment by scheduling only while 12 could use equipment at any time.

The primary use of the VCR by vocational agriculture departments was viewing prepared video tapes (87%). Other top uses for the VCR were taping demonstrations (27%), taping field trips (25%) and contest preparation (23%). Those departments without VCRs indicated probable use in taping lectures in addition to current uses.

The survey instrument determined positive attitudes toward the use of the VCR to improve teaching programs and that additional materials should be developed in VCR format. Departments viewed inservice training by video tape favorably which has implications for teacher education departments on tight budgets for inservice delivery alternatives.

Miller, Glen M. (1986). Effects of a hearing protection device on cognitive and motor performance of students in noisy environments. Doctor of Education Thesis, Mississippi State University, Mississippi State.

This study examined the effects of a hearing protection device (HPD) on student performance of cognitive and motor skills in noisy environments. It was designed as a randomized, posttest only, control group experimental design. A sample was identified from students enrolled in vocational agriculture in Mississippi. Noise was recorded, equalized and amplified to 100dB(A).

The dependent measure of cognitive performance was scores from the American Institute of Research Test of Farm Equipment Mechanics, Section 13, Diagnosing Malfunctions. The dependent motor performance measure was the General Aptitude Test Battery Sections 11 and 12, Test of Finger Dexterity.

The experimental group used a foam type HPD with an attenuation of 31dB(A). The control group used a placebo device. Testing was conducted in 13 high schools. Students were tested concurrently using pre-recorded instructions.

Statistical analysis were conducted using one-way analysis of variance, $p<.10$. Assumptions of the data were verified. Post hoc correlations were conducted using a Pearson Product Moment correlation matrix.

Hypothesis one was rejected. Students exposed to attenuated noise performed significantly better than the control group on cognitive measures [$F(1,58) = 7.68$, $p<.007$].

Hypothesis two was rejected. Students exposed to attenuated noise performed significantly better than the control group on motor measures [$F(1,58) = 3.89$, $p<.05$].

Post hoc studies revealed significantly moderate correlations for the variables Grade with Race ($r = .38$, $p<.002$), Grade with Cognitive Score ($r = .33$, $p<.009$), Group with Cognitive Score ($r = .34$, $p<.007$), Group with Motor Score ($r = .25$, $p<.053$), and a significant weak correlation for Race with Motor Score ($r = .24$, $p<.062$).

It was concluded that wearing a disposable foam type HPD capable of reducing noise by 31dB(A) reduces the loss in performance which occurs due to noisy conditions. Because loud noise is detrimental to student performance and because a quality HPD reduced these losses, a HPD should be used routinely in noisy environments.

Owens, Thad O., Jr. (1986). An analysis of selected variables related to student program choice and student performance in Mississippi public junior college agriculture programs. Doctor of Education dissertation, Mississippi State University, Mississippi State.

The purpose of this study was to describe students enrolled in transfer, technical, and vocational agriculture programs in the Mississippi public junior colleges; to describe those variables

which influence students to select agriculture as a major; to determine those variables which discriminate between successful and unsuccessful students majoring in agriculture in the Mississippi junior colleges; and identify those variables which discriminate among students majoring in the different agriculture programs in the Mississippi public junior colleges.

The population for this study was 249 students enrolled in transfer, technical and vocational programs at the public junior college level in Mississippi. Data were collected using a questionnaire, super's work value inventory, and a student evaluation form completed by the students' instructors. Statistical procedures used in data analysis were frequency distributions, chi-square, analysis of variance, and discriminant analysis.

Students enrolled in the three types of programs were described in terms of personal, family and community variables, educational background and interest levels, and work values inventory.

Parents were the most influential people on choice of program major for students in the three groups. "To prepare for a career" was the selected variable rated most important by students in the three groups.

Forty-three of the 125 variables, operating jointly, explained 78% of the variance for predicting student success. Eight variables had loading values of .30 or higher.

Fifty-five of the 125 variables operating jointly, explained 87% of the variance for predicting program selection. Eleven variables loaded .30 or higher.

Shepard, C. W. (1986). Identifying and validating essential competencies needed for entry and advancement in a forestry occupation. Educational Specialist study, Mississippi State University, Mississippi State.

The purpose of this study was to identify and validate competencies needed for entry and advancement in forestry occupations in Mississippi.

Advisory Council members, and professional and technical forestry personnel developed competency lists using an extensive literature review. From these lists the survey instrument was developed.

The instrument was hand delivered to the 28 selected participants. The project was explained, along with the cover letter for additional information. Participants represented professional and technical personnel along with private consultants and forest land owners. The 49 identified competencies were rated on a four-point scale, "essential" (4) to "not important" (1). The data indicated 25 of 49 competencies as "important", (3.0) or above. Four of the competencies were ranked at "of some importance", (2) or below.

The competencies dealing with timber management and technical skills rated as "important". Routine maintenance and timber products management were rated "of some importance" or below.

Those competencies which rated in the middle to high range included safety skills and basic background knowledge of forestry. The data would indicate that completers of high school forestry programs are expected to be crew leaders and to work closely with the professional foresters as aides and assistants. They are considered field bosses and expected to solve minor problems in the field.

The data have implications for evaluating and updating current programs in light of the industry validated competencies. The results can be used to determine equipment and supplies needed to teach the desired competencies. The competency list can provide skills for planning supervised occupational experience programs. This study has implications for providing employers a list of skills and competencies for future reference in determining job descriptions.

Shinn, G. C. (1986). An analysis of tasks performed in tractor dealerships over time. Staff Study, Mississippi State University, Mississippi State.

A case study technique was used by Crabb (1982) and Clark (1985) to identify mechanical tasks performed by technicians in selected tractor dealerships. The primary objective of this study was to examine the relationships of task categories within and among dealerships by frequency and month in which they were performed.

The instrument used by both researchers was based on a listing of maintenance tasks developed by Thieme (1982). John Deere Flat Rate Manuals provided the framework for the classification system.

There was a very strong association between the mechanical tasks performed within the replication in one dealership. There was a very strong association among the tasks performed among four dealerships. There was a moderate association between the tasks performed by month within the replication in one dealership. There was a substantial association between the magnitude of tasks performed by month in four dealerships in North Mississippi.

MISSOURI

Birkenholz, R. J., Stewart, B. R., and Linhardt, R. E. Evaluation of instructional uses of microcomputers in agriculture. Staff Study, University of Missouri-Columbia.

The objectives of the study were to evaluate three teaching strategies which utilize microcomputers and to develop guidelines for utilizing selected microcomputer-enhanced teaching strategies. A post-test only, control group design was employed to experimentally test the effectiveness of tutorial, drill and practice, and simulation teaching strategies. Thirty-two vocational agriculture classes in Missouri secondary schools were randomly selected to participate in this project. Computer programs were developed which incorporated the three teaching strategies. Participating students were randomly assigned to one of four groups representing the three teaching strategies or a control group. Student achievement and student attitudes toward the subject matter served as the dependent variables. Data were analyzed using analysis of variance and correlational procedures.

The following conclusions were based on the findings of the study: (1) strategies incorporating microcomputers were neither more or less effective than the traditional teaching strategy; (2) utilizing microcomputer-assisted teaching strategies did not appear to reduce the amount of teacher preparation time necessary for effective instruction; (3) simulation computer programs appear to maximize the capabilities of microcomputers and exhibit the greatest potential for instructional purposes; and (4) individual student access to microcomputers should be maximized to increase the "time on task" during microcomputer enhanced instruction.

Bousayakaew, Kleum. (1985). Community development competencies needed by teachers of agriculture in southern Thailand. Ph.D. dissertation, University of Missouri-Columbia.

The purposes of the study were to compare the perceptions about community development activities of community development workers, agricultural officers, secondary school administrators, and vocational agriculture teachers and to compare the perceptions of the groups of subjects based on birthplace and years of work experience. The population for this study consisted of the 38 head community development workers and the 38 agricultural officers at the provincial and district levels, the 50 secondary school administrators, and the 105 vocational agriculture teachers at the secondary level in the four southern Thailand border provinces. The design was ex post facto in nature using a mailed survey to collect

the data. Responses were received from 200 of the 231 persons surveyed for an 86.6 percent return. Respondents were asked to rate 123 competency statements on a six-point Likert-type scale. An analysis of variance was used to compare the perceptions of community development workers, agricultural officers, secondary school administrators, and vocational agriculture teachers regarding the importance of competencies for community development activities. If significance was indicated, the post hoc analysis used was the Least Significant Difference Test. Null hypotheses were fomulated and tested at an alpha level of .10.

Based on the data collected, it was concluded that: (1) agricultural officers expected greater competence in the area of community development than did the other groups; (2) community development workers expected the least competence in the area; (3) secondary school administrators and vocational agriculture teachers had similar expectations; and (4) the place of birth or the amount of work experience did not significantly influence the expectations of the groups.

Diaz, I. R. (1986). Preferred learning styles of community college career and transfer students. Ph.D. Dissertation, University of Missouri-Columbia.

The purpose of this study was to ascertain if there was a difference in learning styles of community college students in career and transfer programs as measured by the Canfield Learning Styles Inventory. The instrument used was the Canfield Learning Styles Inventory. There were 550 inventories administered. Duplicate responses or incomplete answers reduced the total number of useable responses to 418. The independent variables were program area (career and transfer) and sex (male and female). The dependent variables were scores regarding each of the Learning Styles Inventory scales for the categories of conditions, content, mode, and expectation. To identify the effects of program area and sex on the categories of conditions, content, mode, and expectation, a 2 by 2 (male/female x transfer/career) design was used. A multiple analysis of variance procedure was used to analyze the data.

Based on the results of the study, it was concluded that female students have greater interest than male students for the following areas: qualitative, people, and listening. Male students, on the other hand, have greater interest than female students for inanimate. Career students have greater interest than transfer students for inanimate and greater expectation for average and below average performance. Transfer students, on the other hand, have greater expectation than career students for above average performance.

Habeeb, M. (1986). Perceptions of the Missouri extension service. Ph.D. Dissertation, University of Missouri-Columbia.

The objectives of this research were to ascertain if a difference existed between extension council officers' and extension clientele's perceptions of the following dependent variables: (a) extension information; (b) extension agricultural specialists; (c) extension methods; and (d) the agricultural extension education program and to ascertain if a significant relationship existed between farm operators' perceptions of the dependent variables and selected personal characteristics. A mailed questionnaire was sent to 150 extension council members and 400 extension program participants representing five counties from north Missouri and five counties from south Missouri. Each of the counties and respondents were randomly selected. The data collection instrument utilized in this research effort was developed by Young and Cunningham (1977) and was characterized by a 0.98 estimate of reliability. Data were analyzed using analysis of variance and regression analysis procedures.

The following conclusions were based on the findings of this study: (1) although both extension council officers and extension clientele were satisfied with the extension information and the extension specialists, the extension council officers perceived the help from the extension information and the extension specialists to be more valuable than did the extension clientele; (2) extension council officers perceived the help from the extension information and the extension agricultural specialists to be of more value than did the small farm operators; (3) south Missouri farmers perceived the information to be more valuable than did the north Missouri farmers; and (4) the number of extension meetings attended and the number of extension contacts were positively related to small farm operators' perceptions of extension information and the agricultural extension education program.

Mullinix, M. K. (1986). Workshop effect on curriculum implementation. Ph.D. Dissertation, University of Missouri-Columbia.

The purpose of the study was to ascertain the effect of different workshop approaches on technical knowledge mastery and on subsequent implementation of a new fruit and vegetable crop production curriculum guide by Missouri vocational agriculture instructors. Workshops were conducted to familiarize Missouri vocational agriculture teachers with a new fruit and vegetable crop production curriculum. Study subjects were Missouri vocational agriculture instructors who choose or asked to participate in those

workshops but were unaware of their involvement in a formalized study. In one workshop, participants were given a copy of the new curriculum to refer to during the session and to keep. A second identical workshop was presented but no curriculum guides were referred to or distributed. Post-treatment achievement tests were administered to both treatment groups. A control group was tested prior to the workshop treatment. Study subjects were subsequently surveyed to ascertain each participant's intent to implement the new curriculum. There was no control group for this portion of the study. Data were analyzed at the 0.05 percent level of statistical probability using an analysis of variance procedure.

The following conclusions were based on the findings of the study: (1) workshops designed to familiarize instructors with new curriculum technical subject matter is an effective means of improving levels of technical subject matter expertise for vocational agriculture instructors; (2) use of actual curriculum guides for reference during such workshops is not necessary to effectively raise technical subject matter expertise levels of instructors; (3) supplying instructors with new curriculum guides did not appreciably affect their ultimate decision to implement the curriculum; however, it did affect their decision as to when the curriculum was to be implemented; and (4) those that demonstrate (via achievement test) a higher level of technical expertise for a given subject are more likely to use a new curriculum guide.

Okai, M. N. (1986). The delivery of agricultural information to small farmers. Ph.D. Dissertation, University of Missouri-Columbia.

The purpose of this study focused on the following research questions: (1) Is there a variance in the farmers' perceptions of the importance of various program delivery systems? and (2) Is there a difference in how farmers perceive the importance of various sources of agricultural information when grouped on the basis of age, educational level, years of farming, gross farm income, size of the farm enterprise, and the type(s) of farm business? The population for this study consisted of 200 small farm families enrolled in the small farm program in Southeast Missouri. Forty farmers were randomly selected. The data were gathered by personal interviews. Appropriate null hypotheses were formulated to answer question number two. Hypotheses were tested at the .05 level of significance. Descriptive statistics and a Chi-square analysis were used to analyze the data. Responses regarding farmers' perceptions of the program delivery systems showed that farmers were basically satisfied with the program. Farmers ranked the importance of eight sources of agricultural information as follows: extension education assistants,

extension publications, friends and neighbors, radio and TV, newspapers and magazines, commercial dealers, area extension specialists, and vocational agriculture instructors.

The conclusions of the study were: (1) the more educated the farmers, the more they sought professional information; (2) years of farming experience had no influence on the use of information; (3) farmers who had larger farm acreages relied on newspapers and magazines more than farmers who had fewer acres; (4) the effectiveness of the small farm program will depend upon the degree to which demonstration activities were emphasized; and (5) educational assistants with similar economic and educational backgrounds working with small farmers will tend to have a positive impact on the delivery system.

MONTANA

Gilman, H.W. (1986). The perceptions of Montana vocational agriculture teachers regarding how teaching salaries meet their financial needs. Master of Science Professional Paper, Montana State University, Bozeman.

The purpose of this study was to determine the teachers' perceptions of how teaching salaries met the financial needs of Montana vocational agriculture teachers, the degree to which teachers supplemented their income, how that supplemental income was used and sources of that supplemental income.

There is a need to retain highly qualified and experienced teachers in the profession. One of the main factors causing teachers to leave the profession has been salaries. This descriptive research study was conducted to further investigate the salary issue. The population of the study consisted of fifty Montana vocational agriculture teachers who had taught for at least one year prior to the 1985-86 school year. The study was based on a 78.1 percent response rate.

The research concluded that the salary issue will continue to be a major factor causing vocational agriculture teachers to leave the profession. Teachers spend 81 percent of their teaching salary for necessary financial needs. Teachers with supplemental income use 67 percent of that income for necessary financial needs. Approximately 2 to 5 percent of total teacher income was spent in each of the areas of professional involvement, teacher recertification, inservice workshops, volunteer work and educational advancement. Teachers spend 12 percent of teaching salary and 59 percent of their supplemental income for capital accumulated. Teachers supplementing income tend to find that income originating from agriculture production, spouse's income, part-time work and capital and dividend income. Teachers that earn supplemental income spend approximately 18 percent of their total work time generating that income.

Latham, L.R. (1986). Impact of vocational agriculture training on the continued learning patterns of former Wyoming vocational agriculture students. Master of Science Professional Paper, Montana State University, Bozeman.

This study determined the impact of vocational agriculture training on the continued learning patterns of former Wyoming vocational agriculture students who graduated from high school in 1980 through 1985. Data for the study were gathered through the use of mailed questionnaires sent to a sample of 489 former students. Information from the returned questionnaires was coded,

entered on a data disk using "WORD STAR" and statistically analyzed with the use of "MSU STAT".

Based on the results of this study, it was concluded that vocational agriculture training did impact the continued learning patterns of former Wyoming students. Students felt that vocational agriculture experiences influenced their decision about post-secondary education greatly or to some extent. Most students did attend a post-secondary educational institution after high school graduation, and felt that vocational agriculture influenced their selection of major. They also indicated that vocational agriculture greatly or to some extent prepared them for college. Students who attended a post-secondary educational institution after high school graduation more frequently participated in other knowledge-gaining activities than did students who did not attend a post-secondary educational institution.

Mapston, K.D. (1986). Use and value of supervised occupational experience programs and related instructional activities in the western states. Master of Science Professional Paper. Montana State University, Bozeman.

This study determined the perceptions of Western Region vocational agriculture teachers and state of regional FFA proficiency award winners in ten selected areas of ownership and placement in supervised occupational experience relating to the amount of time spent and perceived value of supervised occupational experience instructional activities.

Each respondent was asked to indicate the amount of time spent on classroom instruction concerning SOE and the amount of time spent on instructional on-site visitations. The respondents were asked to rank selected activities as to what activities influenced a student to conduct an SOE program, what activities are the most beneficial to students, and what activities are the most important in the development of an SOE program. By rating each question either "strongly agree," "agree," "disagree," or "strongly disagree," a four-point value Likert-type scale was used to weigh each statement equally and to reflect the intensity of each respondent's attitude. The mean, standard deviation, and t-score at the .05 confidence level were used to compare each question.

The results of the study indicated that there is a high correlation of agreement between the Western Region FFA proficiency award winners of time spent in developing a proficiency award winner for state or national recognition. The success of the proficiency award winner is due to the involvement of the vocational agriculture teacher and is in part a reflection of his/her vocational agriculture program. Further, the study indicated that teachers are

spending more time and assistance on activities that are easier to teach than on more difficult subject areas such as locating an SOE, obtaining financial assistance, and teaching management strategies.

NEBRASKA

Dillon, Roy I. Relationships Between Agriculture Experience and Grade Earned in Selected Basic College Courses in Agriculture For Majors In Agricultural Education. Staff Study. University of Nebraska-Lincoln

The problem was to determine the relationship between agricultural experience and grade in Animal Science 101, Agronomy 101, and Mechanized Agriculture 117, all basic agriculture college courses.

Forty-six agricultural education majors evaluated their agricultural occupational experience prior to entering college, using a questionnaire based on 98 job titles taken from the National Ag Education Competency Report.

Significant Correlations were found for the job titles of Small Animal Supplier and Animal Health Assistant when comparing agricultural occupational experience and grade earned in Animal Science 101.

Significant correlations were found for the two job titles of Production Ag Mechanic and Tractor Mechanic Helper, when comparing agricultural experience and grade earned in Mechanized Ag 117.

There was a wide variation in the breadth of agricultural experience by agricultural education majors and it was concluded that previous agricultural occupational experience had little influence on academic achievement in selected basic college courses.

Dillon, Roy D. (1986). Perceptions of Vocational Agriculture Subject Matter Areas. Staff Study. University of Nebraska-Lincoln.

The purpose was to determine the extent of agreement among school administrators (Superintendents) vocational agriculture teachers, and senior secondary vocational agriculture students concerning the emphasis placed on thrity-two agriculture/agribusiness subject matter areas.

Forty-eight schools were randomly selected in Nebraska. A thirty-two item questionnaire was sent to each of the three respondent(s) in each school.

Responses were received from 33 schools administrators, 33 agriculture teachers, and 273 students.

Significant differences were found among the three respondent groups for 19 of the 32 agriculture/agribusiness subject matter areas. Superintendents rated 13 of the 32 areas higher than the other two groups. Congruency among the groups showed in the agricultural mechanics area and supervised occupational experience program areas, both visible areas in the local vocational agriculture program.

McClain, C. R. (1986). A study to determine the relationship between the personality types of secondary vocational agriculture teachers and their degree of teaching effectiveness. Doctoral dissertation, University of Nebraska - Lincoln.

The purpose of this project was to improve the vocational education preparation program at the University of Nebraska - Lincoln, through a three part study. First, 205 teacher competencies were identified by a panel of experts from existing competency lists. Second, recent UN-L graduates were asked to evaluate their own personal preparation while at the University. Third, a panel of successful vocational agriculture teachers were asked to rate each competency statement as to its importance for successful entry and advancement into a secondary vocational agriculture teaching career.

Summarizing the findings, vocational agriculture teachers graduating within the past five years rated their preparation as "High" in 49 competencies and "Low" in 13 competencies. THe highest ratings were in the general area of "Professional attitudes and abilities", while the lowest ratings were in the area of "Adult education".

On a five point scale (5 = essential; 1 = unimportant), the panel of successful vo-ag teachers rated 98 competencies 4.00 or higher, while only 1 was rated lower than 3.00. The general areas receiving the highest ratings were: "Professional attitudes and abilities"; "Instructional planning"; and "Teaching methods and techniques". The general area receiving the lowest ratings were: "Coordinating the part time cooperative program"; and "Adult education".

As a result of this project, the present preservice curriculum in agriculture education at the University of Nebraska - Lincoln is being reviewed, an agriculture education component is being developed, and plans are underway to develop an early experience program. Also an agricultural education advisory committee has been formed to set direction for the preparation of vo-ag teachers in particular and ag-ed majors in general.

NEW YORK

Cushman, Harold R. (1985). A task analysis of the job of the teacher of agriculture in the South Pacific. The University of the South Pacific Institute for Research, Extension and Training in Agriculture. Cornell University, Ithaca.

The purposes of this study were: (1) to identify the professional (pedagogical) competencies and tasks performed by teachers of agriculture in the South Pacific, (2) to determine where potential (new) teachers of agriculture should learn to perform each task and (3) to estimate the performance level to which needed competencies should be developed. Questionnaire responses returned by teachers of agriculture and their ministers/directors of education in the Cook Islands, Fiji, Kiribati, Nuie, the Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa were weighted to reflect population statistics. The resulting data were analyzed using frequencies and percentages, ranking and a nomograph for estimating prediction coefficients.

The findings indicated that 144 professional education tasks were performed by teachers of agriculture. Successful performance of these tasks required teachers to develop varying levels of competence in 11 professional areas including: (1) personal, school and community relations; (2) program planning development and evaluation; (3) instructional planning; (4) class instruction; (5) instructional evaluation; (6) instructional resource management; (7) agricultural student practice; (8) guidance and counseling; (9) advising an agricultural student organization; (10) teaching adult education courses, and professional development.

Recommendations concerning the competencies to be emphasized during pre-service teacher education and in-service teacher education programs were made by ministers/directors of education; and ranked and codified in the report.

Data obtained from teachers of agriculture and ministers/directors of education were used to estimate the performance level to which each competency should be developed by teachers of agriculture in the South Pacific.

Fuatai, Lafitai I. and Cushman, Harold R. (1986). The further improvement of the advanced certificate in teaching agriculture (ACTA) program. The University of the South Pacific Institute for Research, Extension and Training in Agriculture. Cornell University, Ithaca.

The purposes of the study were : (1) to ascertain the occupations pursued by former ACTA students after leaving the University of the South Pacific, (2) to identify the levels of competency needed in the major areas of the job of the teacher of agriculture by students leaving the ACTA Program, (3) to determine changes in emphasis needed in the content of the specialized courses dealing with the teaching of agriculture and (4) to obtain the recommendations of former students concerning student teaching.

A questionnaire was utilized to take a census of the participants in the 1982, 1983 and 1984 ACTA programs. The resulting data were analyzed using frequencies, percentages and ranking.

It was concluded that nearly all (91 percent) of the participants in the ACTA Program took up professional agricultural education posts in the first year after leaving the University and that a majority continued in such posts.

The areas of competency emphasized in the specialized courses dealing with the teaching of agriculture were highly relevant to the needs of the participants when they returned to the world of work. The respondents reported that a high level of competency was needed in: personal, school and community relations; program planning, development and evaluation; instructional planning; class instruction; instructional evaluation; instructional resource management; agricultural student practice; guidance and counseling; advising a student organization and professional development. The respondents recommended that a somewhat higher level of student performance be developed in the main areas of competency required by teachers of agriculture on the job.

It was further recommended that off-campus student teaching should (1) continue to take place in students home countries, (2) be extended from seven to eight weeks, (3) be scheduled following all course work, (4) be supervised by the supervising teacher, the headmaster, a representative of the ministry/department of education and (5) continue to be focused on development of the competencies needed by teachers of agriculture on the job.

Sutphin, D. (1986). Relationship between influence factors on student's vocational enrollment and enrollment patterns. Staff Study, Cornell University, Ithaca.

The objectives were: (1) determine and compare the image of vocational education as perceived by students, their peers and parents; (2) determine the benefits/purposes of vocational education; (3) determine the extent to which selected factors influence students to enroll in vocational education;

(4)describe the relationship between the independent variable, exposure to VoPro, and selected dependent variables.

The design for this study was expost facto which was descriptive correlational in nature. Six superintendents of Boards of Cooperative Educational Services (BOCES) in western New York were given a written description of the study. One "typical" school district with 139 sophomores elected to participate. The accepting sample was 129 seniors. Content validity and instrument reliability was established for a mailed questionnaire.

Fifty-four percent of respondents were male. Sixteen percent had taken at least one vocational course prior to their sophomore year and twenty percent were currently enrolled in vocational education. Further education in college is planned by seventy-one percent of the respondents.

On a four point likert rating scale (1=very negative). Students perceive that peers ($\bar{x}$=2.5) are less positive and that parents are slightly more positive ($\bar{x}$=2.8) about vocational education than their self view ($\bar{x}$=3.7). Sixty percent of students plan/or are considering enrollment in vocational education courses are offered in their home school compared with thirty percent offered at BOCES.

The highest perceived benefits of vocational education was job placement, followed closely by preparation for two year college and preparation for four year college.

The most negative influence on enrollment was time commitment to attend class and peer image of vocational education. The most positive influences for enrollment was type of job training. Decision to enroll in a vocational education course was slightly related to VoPro posters and materials (r=.24). Additional research is needed to explain the factors investigated in this study.

Strategies should be identified which enhance the image of vocational education. VoPro is making a positive impact on enrollment in vocational education by promoting and providing information about vocational programs.

Sutphin, D. (1986). Vocational, academic, and special education teacher assignment and student enrollment patterns. Cornell University, Ithaca.

The research objectives pertain to a random sample of 79 school districts in New York State and address 7 through 12 academic, vocational and special education programs (curricula area). The objectives were: (1) compare 1978-79 with 1982-83 school year on teacher assignment patterns by curricula area; (2) compare small rural school and high enrollment school district

with respect to the teaching assignment patterns by curricula area; (3) compare 1978-79 with 1982-83 school year grades 7-12 enrollments by curricula area; and (4) compare changes in grade 7-12 student enrollment between 1978 and 1983 by curricula area and across district size.

The data source was from the New York State Education Department tapes of all 653 regular school districts for the school years 1978-79 and 1982-83. An alpha level of .05 was established apriori to determine significance.

Teacher assignment patterns across year by vocational, academic and special education programs were significant at the .05 alpha level and were highly correlated. By percent of total for 1978, there were 4.5%, 88.7% and 6.9% assignments for vocational, academic, and special education, respectively. By comparison in 1982 there were 4.7% special education, 88.3% general education and 7% vocational teacher assignments. Cross sectional analysis revealed that each type of teaching assignment was significantly related across the time period between high and low enrollment districts. During the time period 1978 to 1982 large and small school districts vary together in terms of decline in teaching assignments and average daily registration of students by curricula area. The next round of data in 1986 should provide greater insight on the affects of more drastic declines in school enrollment across special education, general education, and vocational education.

Sutphin, D. (1986). Diffusion of technology in New York State Agricultural Secondary, Post Secondary and Extension Programs. Agricultural Experiment Station Project Paper. Cornell University, Ithaca.

The purpose of this research was to identify and explain the innovation-decision process (using Rogers theory) for the diffusion of microcomputer use in 1984-85 by New York agricultural extension, post secondary, and secondary agricultural programs in order to plan inservice. The specific objectives were to: (1) describe prior conditions associated with diffusion of microcomputers for teaching; (2) identify and describe microcomputer diffusion; (3) describe (a) characteristics of the innovation, (b) characteristics of the communication channels, (c) time factors, (d) types of innovation-decision processes and (e) characteristics of the social system within which computers are implemented in agricultural education.

This survey research provides the basis for a longitudinal study following a modified time series design.

An instrument was developed, reviewed by a panel of experts to establish validity and field tested and establish reliability. Response rates to the mailed questionnaire were 62, 48 and 76.5 percent, respectively, from the population of agricultural secondary, postsecondary and extension agents.

Most secondary and post secondary agriculture teachers work in schools of less than 1500 students. Extension agent, on the average, work in counties with populations less than 100,000. There is limited availability of hardware and software for use by agricultural educators.

Seventy-five percent of all respondents had some knowledge of microcomputers obtained through inservice. Positive attitudes toward computer use were expressed by 95 percent of the respondents. Approximately 54 percent of teachers and 75 percent of extension agents use computers. Most respondents were committed to continue use of computers.

Conditions prior to 1984-85 and present conditions provided moral support for computing but lacked resource commitment. Agricultural educators lacked knowledge to effectively implement microcomputers without inservice. Characteristics of the technology appear compatible with the mission of agricultural education. A theoretical model is helpful to guide the research on diffusion of microcomputer technology.

Sutphin, Dean and Berkey, Arthur. (1986). Factors affecting the diffusion/use of an on-line database system (AgriData) for instruction in vocational agricultural programs in New York State: Phase I--a case study approach. Hatch funded research project, Cornell University, Ithaca.

The purpose of the study was to provide data to plan strategies for using on-line databases in agricultural education.

The objectives were to: (1) identify the prior conditions of previous practice, felt needs and norms of the social system associated with the levels of the innovation-decision process; (2) identify and describe the diffusion of the on-line database along the innovation-decision continuum; (3) describe teacher perceptions about the characteristics of AgriData; and (4) determine movement along Roger's continuum of innovation-decision with three levels of intervention.

The case study approach was used. Teachers of agriculture in six text schools were the data source. Schools were selected based on the criteria of geographical distribution, use of computers in the vocational agriculture program, and teacher potential to implement AgriData. A grant from AgriData and the National FFA was obtained to fund the test centers.

Level one data collection provided no assistance in using AgriData. One center did not use AgriData due to equipment problems.

Level two data collection provided telephone assistance as requested by the teacher. Concurrently, research staff developed three lesson plans that incorporated AgriData.

Level three data collection involved a questionnaire on use of AgriData, and a taped interview that clarified and expanded questionnaire responses in order to provide quantitative and qualitative data. Lesson plans supported by site consultation and an in-service session were provided.

Prior conditions showed no prior use of AgriData and high interest. An expectation for computer use in vocational agriculture existed. Limited computer use and funding existed. Teachers varied in their progress along the innovation-decision continuum. AgriData was an advantage over other teaching strategies and use was limited by complexity. Budget and teacher in-service is needed to optimize diffusion. Use of on-line databases enhances instruction.

Sutphin, D., Rush, M., and Dillon, R. (1986). An assessment of the national FFA public service announcement program. AVA Research Project Report, Cornell, Penn State, and the University of Nebraska.

The purpose of this study was to evaluate the effectiveness of the national FFA filmed Public Service Announcements (PSA) and make recommendations for future use of PSA programs. The research objectives were to: (1) assess the effectiveness of the PSA; (2) compare the effectiveness by FFA Regions; (3) compare PSA effectiveness with regard to (a) number of PSA's viewed (1, 2, 3 and 4 and (b) different lengths of PSA's viewed (10, 20, 30, or 60 seconds; (4) compare by FFA Region (a) balance between vo-ag and FFA; (b) the scope of agriculture represented, (c) positive impact, and (d) recommendation for continued use with levels of the independent variables "length" and "frequency" of PSA's viewed; (5) identify recommendations for future use of FFA filmed Public Service Announcements.

The methodology used in this study was descriptive correlational. Data were collected using a mailed questionnaire. Instrument and content validity and reliability were established.

A random sample of 420 agriculture teachers in the United States and territories was selected from the 1983 National Agriculture Teacher's Directory which contained approximately 12,000 names. Three hundred and seventeen potential respondents were identified for the sample which were within broadest distance of known stations which carried PSA's.

The response rate was 76 percent (241 returns). A twenty percent sample of nonrespondents revealed no significant differences with respondents.

FFA public service announcements were viewed on TV by 70.5 percent of the 241 agriculture teachers who responded.

The highest rating of PSA's was given by agriculture teachers with a mean score of 3.5 on a four point likert scale (4=Excellent). Ratings for high school administrators were lowest (x.1).

No significant differences concerning the content of the PSA or future need for PSA were found among the four FFA regions. No differences with regard to frequencies of viewing PSA were found when comparing all regions or between regions at the .05 level. Poor showing times for PSA's such as late night and early morning were considered a problem among some respondents.

Public Service Announcements (PSA) were effective and should be continued. Public relation campaigns can be conducted at the national level which are equally effective in all regions of the United States.

NORTH DAKOTA

HANDEGAARD, Stephen K. (1986). Reasons Why Minnesota County Extension Agents with Five or More Years of Extension Experience Remain in the Profession. Master of Science Thesis, North Dakota State University, Fargo.

The purpose of this study was to identify major reasons why Minnesota county extension agents with five or more years of experience remained in the profession. Specific objectives were:
1) to determine the level of influence a selected list of factors might have had on the decision of Minnesota county extension agents with five or more years of experience to remain in Extension;
2) to compare the relative influence of selected factors among tenure groups of county extension agents; and
3) to compare the relative influence of selected factors among program area groups.

A questionnaire was developed and sent to all (159) Minnesota county extension agents with five or more years of extension experience. The initial mailing of the questionnaire was on February 28, 1986; a follow-up mailing to nonrespondents was done on March 14, 1986. The response rate was 95%. Respondents were asked to rate the influence of 39 selected factors on their decision to remain in the profession. In the data analysis, factors were ranked according to their mean scores. One-way analysis of variance was used to test for differences in responses between program area groups and also between agent tenure groups.

The study shows that county extension agents who have remained in the profession for five or more years are generally very dedicated professionals. These agents derive satisfaction from serving others in a meaningful way and, in general, feel their work is a very important and valuable contribution to their communities.

Many other intangible and tangible type job benefits were found to have had important influences in agents' decisions to remain in the profession. Factors which related to recognition, support, and family appeared to have had less influence on their decisions to remain in the profession.

Ten of the 39 influence factors were found to have significant differences in responses between agriculture, HE-FL, and 4-H agent program areas. Five of the influence factors were determined to have significant differences in reponses by tenure groups.

KEITA, Dougou. (1986). Professional Competencies Needed by Beginning County Cooperative Extension Agricultural Agents in Minnesota, North Dakota, and South Dakota. Master of Science Thesis, North Dakota State University, Fargo.

The purpose of this study was to identify professional compe-

tencies needed by beginning county agricultural agents of the Cooperative Extension Services of Minnesota, North Dakota, and South Dakota.

The population of this study consisted of 78 county agricultural agents with at least one year but no more than five years of extension work experience, presently employed by the Cooperative Extension Services of Minnesota, North Dakota, or South Dakota. This total population was distributed as follows: Minnesota-43; North Dakota-13; and South Dakota-22. A questionnaire was developed and sent to each agent. The Cronbach's coefficient alpha for the 40 competencies included in the instrument was 0.93. All 78 agents returned the questionnaires, and all returned questionnaires were usable. Frequencies, percentages, and mean scores were determined in analyzing data.

Competencies perceived as most important by the agents surveyed were as follows: Ability to get along with people; Ability to remain up to date through regular reading, workshops, and conferences; Ability to develop support of local people for extension programs; Ability to assess county situation and needs; Ability to identify priority program; Public speaking ability; Understanding principles of communication; Write effective reports and news articles; and Ability to identify and select appropriate physical, material, and human resources for needs of programs.

Among the 40 selected competencies, nine were perceived to have a high to very high importance, 30 were perceived to have a moderate to high importance, and one was perceived to have a low to moderate importance.

Only minor differences occurred between the ratings when comparing mean scores among states. Minnesota ranked slightly higher on 19 of the 40 competencies, South Dakota on 13, and North Dakota on 10.

With regard to educational mode, on the job training and college undergraduate program were indicated by the majority of respondents as most appropriate for the development of most of the selected competencies. Here again, a difference was not apparent between states regarding this information.

LUFT, Vernon D. (1986). Leadership Ability of Young Rural Adults in North Dakota. Agricultural Experiment Station Project Number ND-4901, Report No. 1. Department of Agricultural Education; North Dakota State University, Fargo.

The primary purpose of this study was to assess the perceived leadership abilities of young adults residing in rural areas of North Dakota. Specific objectives of the study were:
1) To identify selected biographical characteristics of young adults residing in rural areas of North Dakota such as age, sex, level of education, marital status, and size of family;

2) To determine the perceived leadership ability of young rural adults in North Dakota; and
3) To compare results of the perceived leadership ability of young rural adults using selected biographical characteristics as variables.

The population for this study was young adults (persons between the ages of 18 and 40) residing in rural (cities with a population of fewer than 2,500 and those areas outside of towns and cities) North Dakota. A systematic random sampling procedure was used by the Drivers License Division of the North Dakota Highway Department to produce a final sample of 1,500 names and addresses.

Data were collected by use of a mail survey questionnaire developed by the researcher. A total of 578 questionnaires were returned and used in analysis.

Data were analyzed using descriptive and inferential statistics. The t-test, analysis of variance, and Duncan's Multiple Range Test were used in analysis procedures.

About three-fourths of the respondents were between the ages of 20 and 35, slightly over one-half were female, and approximately two-thirds were married. Slightly more than one-half the respondents were raised on a farm, whereas the majority currently resides in a town or city. Almost all respondents completed at least a high school education, two-thirds completed some education beyond high school, and about one-fourth completed a college degree.

Young adults residing in rural North Dakota tended to perceive their leadership abilities to be quite good. Leadership skills in the categories of General Leadership and Work Related Leadership were perceived to be better than those in the Group Leadership Skills and Speaking Skills. The Speaking Skills category was perceived to be their weakest area of leadership.

The perceived leadership ability of female respondents in general tended to be higher than male respondents. However, males perceived themselves to have higher leadership ability in the Speaking Skills and Work Related Leadership categories.

Although single respondents perceived their leadership ability to be slightly higher than married respondents, a significant difference occurred in only a few skill statements. Whether or not respondents had children living at home was another characteristic that made little difference on perceived leadership abilities. Those with no children living at home tended to perceive their leadership ability to be higher than those with children living at home.

The location where respondents were raised made very little difference on their perceived leadership ability. Respondents raised on a farm had slightly higher perceived leadership ability than those who were not raised on a farm. Respondents who were not living on a farm perceived their leadership ability to be higher than those who live on a farm.

Persons in the 24 year old and under age category perceived their leadership ability to be higher than other age groups on 40% of the skill statements. However, a significant difference was found on only nine items. Persons in the 35 year old and over category perceived their leadership ability to be higher than persons in the 25-29 and 30-34 age brackets.

The amount of school completed by respondents made more difference on perceived leadership ability than any other characteristic studied. The more school completed, the higher the perceived leadership ability. Young rural adults who had completed 16 years of school or more perceived their leadership ability to be higher than those with less schooling. Those who had completed 13-15 years of school rated their level of leadership higher than those completing 12 years or less.

In summary, the greatest amount of difference in perceived leadership ability occurred between sexes (female being higher) and among various levels of school completed (higher leadership among those with higher levels of school completed). A profile of an individual with the highest level of leadership would be: female, single, no children living at home, raised on a farm, not currently living on a farm, 24 years old or less, and has completed 16 or more years of school.

NICHOLS, David W. (1986). Safety Assessment of North Dakota Vocational Agriculture Mechanics Programs. Master of Science Thesis, North Dakota State University, Fargo.

The purpose of this study was to assess the levels of selected safety factors in North Dakota Vocational Agriculture Mechanics programs and to determine needs for improvement. Specific objectives were:

1) to determine the perceived importance of selected instructor safety knowledge and abilities;
2) to determine if the perceived importance of instructor safety knowledge and ability differed according to length of teaching experience;
3) to determine the perceived level of improvement needed by instructors in selected areas of their own safety knowledge and ability;
4) to determine if the perceived levels of improvement needed in instructor safety knowledge and ability differ according to length of teaching experience;
5) to determine the extent to which selected safety practices and policies were carried out in agricultural mechanics programs; and
6) to determine safety levels of selected factors regarding facilities and equipment in agricultural mechanics programs.

The population included all North Dakota Vocational Agriculture instructors who taught one or more years. A questionnaire was

developed and administered at the All-Service Vocational Conference in August, 1985. A mailing was made to those instructors not attending the conference. The response rate was 100%. Responses for each item were tabulated and percentages were calculated. Responses to the importance and improvement needed items were compared according to years of teaching experience.

Findings of the study included:

1) Instructors generally rated the safety knowledge and skills as essential or important;
2) teachers' ratings of the importance of the safety knowledge and skills generally differed little according to years of teaching experience;
3) there is a perceived need for improvement by instructors in certain areas--especially first aid, CPR, and legal responsibilities;
4) beginning teachers indicated a greater need for improvewment in safety knowledge and skills than did the experienced teachers;
5) there is a need for more strict adherence to safety policies and practices; and
6) there is a need for improvement in the safety aspects of facilities and equipment including electrical cords, ventilation, and hearing protection.

SIEBERT, Dale L. (1986). Perceptions of Carrington, North Dakota, Residents and Business Managers About Farmers and Farming. Master of Science Thesis, North Dakota State University, Fargo.

The purpose of this study was to determine perceptions of Carrington business managers and residents toward farmers and farming. The specific objectives were:

1) to determine the perceptions of Carrington business managers toward farmers and farming;
2) to determine the perceptions of Carrington residents toward farmers and farming;
3) to determine if there is a difference between the perceptions of business managers and those of community residents about farms and farming;
4) to compare the perceptions of business managers and residents by age groups of the survey respondents; and
5) to compare the perceptions of business managers and residents by education level of the survey respondents.

The population for this study was all of the business managers and adult residents of Carrington, ND. A 10% sample was taken of the adult residents and the total population of business managers were surveyed. The study was conducted as a part of a larger study conducted by the Agricultural Economics Department of North Dakota State University on the effects of the farm financial crisis on rural communities.

A questionnaire was developed by Dr. Arlen Leholm, Extension Farm Management Economist-NDSU, Dr. F. Larry Leistritz, Agricultural Economist-NDSU, and Dr. Steve Murdock, Rural Sociologist--Texas A & M University. This questionnaire was given by personal contact to all of the business managers in Carrington by a team of researchers from NDSU. The residents were randomly selected, and a 10% sample received the questionnaire by telephone interview. A total of 106 business managers and 80 residents completed the questionnaire.

Residents of Carrington perceived the financial crisis affecting farmers in 1986 to be more difficult than it was five years ago and estimated the crisis would last another two to five years. Residents and business managers tended to either be neutral or disagree with state and federal financial assistance programs for farmers. Low farm prices were also perceived to be the leading cause of the financial crisis. A portion of the residents and business managers have a negative image about farmers and their problems as indicated by those who chose farmers living beyond their means, expanding too rapidly, and being poor managers as leading causes of the current financial crisis.

Ohio

Amba, Aruk Etim. (1986). Training needs of agricultural extension in the Cross River State of Nigeria. Ph.D. Dissertation, The Ohio State University, Columbus, Ohio.

The purpose of the study was to describe the perceptions of agricultural extension workers about the importance, knowledge level, and ability to perform specific competencies pertaining to extension work. Respondents were 95 randomly selected professional and technical extension workers in the Ministry of Agriculture, Cross River State, Nigeria. Data were collected by face to face interviews.

Mean scores for the perceptions of importance indicated that professional and technical extension workers perceived each of the ten competency areas as highly important to extension work. The ratings of level of knowledge and ability to perform the competencies indicated that professional extension workers perceived themselves more knowledgeable, and that they could perform at a higher level than technical workers. Technical workers also perceived themselves as requiring more training than professional staff workers.

Relationships between age, number of years in extension and perceptions of importance, knowledge and performance for the competency areas were positive for professional staff workers with the degree of relationship ranging from low to substantial. For these variables, there were no relationships for technical staff. The relationships between rank of extension workers and perceptions of importance, knowledge, and performance were positive for both professional and technical staff.

The relationships between the perceived training needs of extension workers and age, number of years in extension, and rank were all negative, ranging from negligible to very strong relationships for both professional and technical staff workers. For professional staff, analysis of perceived training needs by degree held showed no significant differences between master's and bachelor's degree holders. For technical staff, Elementary Six certificate holders had significantly higher training needs than holders of the Higher National Diploma.

Collins, Christy Sue (1986). A comparison of attitudes toward competition in Ohio 4-H: Current 4-H members versus 4-H dropouts. Master of Science Thesis, The Ohio State University, Columbus, Ohio.

The purpose of the study was to describe attitudes of current 4-H members and dropouts toward competition, and identify any existing differences. Preferences of members and dropouts toward direct versus indirect competition were also described and compared. The population studied was 4-H members and 4-H dropouts. Questionnaires were mailed to 172 4-H members (80 percent response) and 172 dropouts (72 percent response). In attitudes toward competition, membership status was found to be significant. No significant differences were found on the basis of sex, age, or years in 4-H. Sex and membership status were found to be significant in preference toward direct versus indirect competition; age and years in 4-H were not significant. All groups had negative attitudes toward competition. In addition, all groups preferred indirect competition.

Dlamini, Barnabas M. (1986). Perceptions of professionals in agricultural education regarding the agriculture teacher education program in Swaziland. Ph.D. Dissertation, The Ohio State University, Columbus, Ohio.

The purpose of the study was to describe professionals in agricultural education and determine their perceptions regarding the agriculture teacher education programs in Swaziland. The target population included 128 professionals in agricultural education consisting of 11 teacher educators, nine state supervisors (inspectors) and 108 teachers. The study was a census. Descriptive correlational research employing a questionnaire was used.

Findings and conclusions were based on a data sample of 116 professionals in agricultural education (90% response rate). The population was assumed to be a sample of Swaziland professionals in agricultural education at a point in time, thus permitting the use of inferential statistics.

Results revealed that the majority of professionals in agricultural education were teachers in secondary schools, were males, were relatively young, were working in rural areas, held the associate degree, had low levels of experience in their work, received their training in Swaziland, and had not studied agriculture while in secondary school.

Professionals in agricultural education perceived the agriculture teacher education programs to be credible in terms of admissions standards, qualification of faculty, technical and professional courses taught, but doing less than adequately in the

areas of student teaching, conduct of inservice courses for agriculture teachers, coordination and linkage with other institutions, general courses taught, and skill training.

Level of education slightly influenced the way professionals in agricultural education viewed the agriculture teacher in agriculture teacher programs, whereas gender, work experience, age, type of profession, place of training, and place of work had no major influence.

Green, Joe W., Jr. (1985). Professional competencies needed by trainers in agribusiness. Ph.D. Dissertation, The Ohio State University, Colulmbus, Ohio.

The main purpose of this study was to investigate the following objectives: 1. Identify the educational and occupational competencies agribusiness trainers perceived necessary; 2. Identify the educational and occupational characteristics possesed by agribusiness trainers; 3. Identify the characteristics of agribusiness relating to training; 4. Compare the competencies required by agribusiness trainers with those of vocational agriculture teachers; 5. Establish the relationship of agribusiness trainer characteristics and the perceived importance of professional competencies; and, 6. Establish the relationships of training departments and/or organization and trainers' perceptions of the competencies. The study was conducted in 1985 by surveying all 139 members of the American Society for Training and Development Special Interest Group in Agriculture residing in the United States and Canada. Individuals were instructed to complete the questionnaire if their primary responsibility was training in agribusiness. The instrument utilized related competency studies in training and vocational education aided by a panel of qualified experts. The questionnaire contained 44 professional competency items measured with a Likert six-point scale. The Cronbach alpha for these items was .95. Twenty additional items were included to gather demographic data on agribusiness trainers and their organizations. Data were analyzed using descriptive statistics procedures including correlation and a one way analysis of variance (ANOVA). The findings were discussed by competency domains. Every domain ranked as high importance. Antecedent data provided information regarding agribusiness trainers and their programs, e.g. training needs are largely determined by subjective means. Trainers were well educated and experienced with preparation in either agriculture, education, or business. Training competencies and demographics did not exhibit strong associastions and the analysis of variance did not detect a significant difference in trainer backgrounds and how they valued that experience. The researcher determined that agribusiness

trainers and vocational agriculture teachers share many comparable competencies.

Kwarteng, Joseph Adjei (1986) . Correlates of county chairperson performance on the Ohio Cooperative Extension service assessment-center. Ph.D. Dissertation The Ohio State University, Columbus, Ohio.

The purpose of this study was to examine the relationships among selected personal and job-related variables of extension county chairpersons, and their performance on the Ohio Cooperative Extension Service (OCES) assessment center. Independent variables included: 1) age; 2) gender; 3) major area of graduate study; 4) number of years in extension work; 5) job satisfaction; 6) initiating structure; 7) role clarity; 8) extension program area of major responsibility; 9) number of previous jobs; 10) perceptions of assessment center. The dependent variable was overall assessment rating (OAR).

A census was conducted of all county chairpersons (N=83) who participated as assessees in the OCES assessment center. A five-part mail questionnaire was used to measure job satisfaction, initiating structure, role clarity and perceptions of the assessment center. The fifth part of the mail questionnaire collected personal and demographic information. The response rate was 96 percent. Assessment center performance data on the sixteen assessment dimensions, and the overall assessment ratings were collected from personnel records at the Ohio Cooperative Extension Service.

Findings indicated county chairpersons had high job satisfaction, high initiating structure, high role clarity and high perceptions of the assessment center. Job satisfaction, gender, and major area of program responsibility were not related to assessment center performance (OAR). Low positive correlations were found between age, role clarity, initiating structure, number of years in extension, and number of previous jobs, and the dependent variable OAR. Moderate, positive association was found between perceptions of the assessment center and overall assessment rating. Perceptions of the assessment center, and the number of years in extension were the best predictors of overall assessment rating.

Makin, Richard C. (1986) The relationships between selected teacher presage variables and supervised occupational experience quality in vocational horticulture programs in Ohio. Ph.D. Dissertation, The Ohio State University, Columbus, Ohio.

The purposes of this study were to investigate the relationship between the quality of supervised occupational

experience (SOE) in horticulture and the teacher's attitude toward SOE and to describe the status of selected teaching practices in SOE in horticulture in Ohio. Hypotheses were that the quality of SOE in horticulture and the teacher's attitude were positively related and that much of the variance in SOE quality can be explained by teacher's attitude.

An ex post facto research design was used. The main independent variable (teacher's attitude toward SOE) and six independent variables were investigated in relation to SOE quality, the dependent variable. The population was vocational horticulture teachers in Ohio in the 1984-85 school year with one or more years of teaching experience.

Findings Teacher characteristics included the following: horticulture teachers were experienced, were likely to be certified by other than a B.S. degree with an agricultural education major, and were unlikely to have had vocational agriculture or conducted an SOEP in high school. Teachers' attitudes and perceptions of administrator support were positive, but perceptions of administrator support for SOE were only slightly positive. Measures of association between SOE quality and the seven teacher presage variables were negligible or low; these variables were concluded to be poor predictors of SOE quality. The outcomes of selected SOE teaching practices were positive, but negligible or low measures of association led to the conclusion that these, too, were poor predictors of SOE quality. Calculations of indices of predictive efficiency for the relationships between SOE quality and teacher presage variables showed that little or no variance could be explained in the dependent measure.

McCracken, J. David (1986). Employer perceptions of the role of schools in preparing youth for productive work. The Ohio State University, Columbus, Ohio.

A study was conducted in Malaysia to ascertain the attitudes of employers about the role of schools in preparing youth for productive work. Interviews were conducted with 98 of 125 randomly selected employers in the Ulu Langat District of Selangor, Malaysia. It was found that employers believed the role of schools should include the preparation of youth for work, and that vocational education should be a part of the school curriculum. In general, employers were dissatisfied with the way youth were being educated. They suggested more vocational training, exposing students to work, instilling good attitudes, and providing a balanced academic and practical educational program. Teacher training, work experience and skilled craftsmanship were recommended as qualifications necessary for vocational education teachers. Employers were willing to provide

work experience for students and advise the schools about what to teach. Characteristics of the place of business were found to be related to employer attitudes, but characteristics of the employer were not found to be related to attitudes. A greater emphasis on vocational education and training in a balanced educational program was desired by the study participants.

Newman, Michael E. (1986). Teacher and employer perceptions of computer skills needed by agribusiness students. Master of Science Thesis, The Ohio State University, Columbus, Ohio.

The purpose of this study was to determine computer skills needed by entry level employees in agribusiness occupations. The 36 agribusiness teachers in Ohio and a purposive sample of 95 employers of agribusiness students were asked to participate in the study.

The major conclusions of the study were: (1) less than half of the agribusinesses owned a computer; (2) most agribusiness students were not using computers on their jobs; (3) teachers perceived the skills as more important than employers; and (4) using a database manager, using a spreadsheet, and knowledge of basic skills are the most important skills for entry level employees.

Odell, Kerry Shawn (1986). The educational and occupational aspirations and expectations of rural Ohio tenth- and twelfth-grade students. Ph.D. Dissertation, The Ohio State University, Colulmbus, Ohio.

The major purpose of this study was to identify the educational expectations and the occupational aspirations and expectations of rural Ohio tenth- and twelfth-grade secondary school students. The extent to which relationships existed between the educational and occupational aspirations and expectations of these students and personal, family, and school characteristics were also investigated.

The population consisted of tenth- and twelfth-grade students in 52 public secondary schools in Ohio that met the study's definition of a rural school. Four strata were established for sampling purposes and a rural school was selected from each of the four strata for inclusion in this study.

Usable data were collected from 491 tenth- and twelfth-grade students. The results of this study indicated that rural students had much higher educational and occupational expectations than their parents had actually attained. The incomes expected by the rural students were shown to be unrealistic when compared to the occupations the students expected to enter.

The educational expectations of the rural students were found to have low to substantial association with gender, type of high school program enrollment, high school grade point average, parental occupations, parental educational attainments, and parental expectations.

The occupational expectations and aspirations of the rural students were found to have low to moderate relationships with gender, high school program enrollment, grade point average, family socioeconomic status, and parental occupations.

The characteristics of rural schools were not meaningfully associated with educational expectations or occupational expectations and aspirations.

Othman, Esmawi B. (1986). Characteristics of SABERKAS' leaders at the District level in the state of Sarawak, Malaysia. Ph.D. Dissertation, The Ohio State University, Columbus, Ohio.

The main purpose of the study was to investigate the leadership behavior of the leaders of SABERKAS in Sarawak, Malaysia. Leadership style possessed by these leaders, their background and training needs were also examined. The researcher further discovered how leadership behavior and leadership style correlated with demographic variables.

This study was descriptive research of a survey type. Both descriptive and correlational methods were used in the final analysis of data. The frame of the population was based on a list of 305 members identified in 26 District Committees. This list was obtained from SABERKAS headquarters. Out of a sample of 211, 185 (87.7%) answered and returned the questionnaires. A major portion of the questionnaire covered leadership behavior which was derived from The Ohio State University's Leader Behavior Description Questionnaire. The other sections of the questionnaire were composed of leadership style, demographic and other questions concerning leadership training and needs of the leaders.

More than fifty percent of the leaders practiced a Consultative style of leadership. A majority of the leaders were between 31 and 40 years of age, married, and had between 6 to 11 years of education. They had been in SABERKAS between 7 and 14 years or since SABERKAS was formed. More than half of the District leaders were involved in other organizations and had participated in leadership training. Not all leaders at the District level came from families of leaders as indicated by only 20 percent of them having relatives involved in leadership activities. In regard to leadership training, a majority of the leaders agreed that youth leaders should be given leadership training.

Richey, Marsha Lynn (1986). Perceptions of the effectiveness of 4-H volunteer key leaders as held by key leaders and County 4-H agents in Ohio. Master of Science Thesis, The Ohio State University, Columbus, Ohio.

The purpose of this study was to describe perceptions of 4-H volunteer key leaders as held by key leaders and county 4-H agents.

Key leaders with: over 10 years of advisor experience, 3 or more years of tenure and no experience as a 4-Her held significantly higher perceptions of their work than those lacking these characteristics. Over 10 percent of the agents perceived key leaders who were female, married, college graduates, past 4-Hers, tenured 3 or more years as key leaders or past or present 4-H advisors as more effective than those lacking these characteristics.

Smith, Penne Lynn (1986). "Farm financial Management" Program participants' perceptions of change in knowledge and skills of financial management and their attitudes toward the Ohio Cooperative Extension Service. Master of Science Thesis, The Ohio State University, Colulmbus, Ohio.

The purposes of this study were 1) to identify the major perceived benefits received by those who attended the Farm Financial Program of the Cooperative Extension Service at the county level, 2) to determine what perceived specific skills were learned by those who attended the farm financial program and which skills were perceived as used or applied and 3) to identify the degree of satisfaction with the Cooperative Extension farm financial programs as perceived by the participants.

The major benefits received by respondents were perceived to be increased knowledge of financial planning and improved management skills. A majority of respondents reported that they had used or applied some of the skills taught. Respondents also believed that they are satisfied with the Cooperative Extension Service programs.

OKLAHOMA

Adeyemi, C. O. (1986). Agricultural workers' perceptions of appropriateness and usage of selected program development concepts for Nigeria extension service. Doctoral Dissertation, Oklahoma State University, Stillwater.

The main purpose of the study was to ascertain the perceptions relative to the appropriateness and usage of selected program development concepts for the Nigeria extension service, as held by two groups of agricultural and extension workers in the various states of Nigeria. A representative purposive sample of 135 agricultural and extension personnel undergoing either the ordinary or higher diploma training program at one of the country's schools of agriculture was used for the study. A questionnaire consisting of 38 items relating to extension programming and 5 of demographic nature was utilized for the study.

The higher diploma group statistically perceived the implementation and evaluation concepts higher than the ordinary diploma group in terms of appropriateness. Although there was no significant difference between the perceptions of both groups for the planning concepts, higher mean ratings were obtained for eight of the thirteen planning concepts by the higher diploma group than did the other group. The higher diploma group also significantly perceived the planning and implementation concepts to be less used than the ordinary diploma group.

Overall, the higher diploma group perceived the program development concepts more than the ordinary diploma group to be more appropriate and less used by the extension service in Nigeria for developing programs for its clientele. It was concluded that the educational background and working experience of the respondents affected their perceptions of the program development concepts. The respondents with higher educational background and greater length of working experience generally perceived the program development concepts to be more appropriate and less used by the Nigeria extension service.

Akpan, M. E. (1986). Perceptions of senior students and teachers concerning selected components of the agriculture curriculum in two Nigerian universities. Doctoral Dissertation, Oklahoma State University, Stillwater.

The main purpose of this study was to determine the perceptions of senior students and teachers concerning selected components of the agricultural curriculum in two Nigerian universities. All the senior students and teachers in the

colleges of agriculture of the Rivers State University of Science and Technology, Port Harcourt, and the University of Calabar, Nigeria were surveyed by the use of a questionnaire. A total of 79 students and 12 teachers participated in the study. The selected curriculum components were grouped into seven areas. A Likert type scale of 1 = Very Little, 2 = Little, 3 = Some, 4 = Much, and 5 = Very Much, was used in the data analysis. Means, ranks, and appropriate ratings were determined for each component. Judgements concerning the knowledge level, practical contents and future emphasis for the selected components were made by the use of predetermined absolute limits for the study. However, both students' and teachers' perceptions were used to recommend components which needed to be strengthened in the curriculum.

Data obtained revealed that both students and teachers generally rated most of the selected courses in the category of "Much" for their knowledge level. However, many courses in the areas of "Agricultural Mechanics and Soil Science" and "Animal Production and Food Technology" obtained lower ratings. Students had an average rating of "Some" for the practical contents of courses, while a rating of "Much" was given by the teachers. All the selected components were rated as having either a "Much" or a "Very Much" future emphasis in the curriculum. Courses which had low ratings for their knowledge level and practical contents were recommended for strengthening in the curriculum. Students suggested more agriculture-related and other courses, while the teachers suggested more agriculture courses to be included. Both students and teachers stressed the involvement of local farmers in the agricultural development of Nigeria.

Baldridge, D. K. (1986). Perceptions of common task training by training managers, trainers, and soldiers of a field artillery battalion at Fort Sill, Oklahoma. Master's Thesis, Oklahoma State. University, Stillwater.

The study examined certain perceptions of military personnel assigned to a field artillery battalion at Fort Sill. The focus of the study was on a fundamental training and education mission of the Army, Skill Level One Common Task Training. The study recognized three different groups of personnel involved in the education process: Officers (training managers), noncommissioned officers (trainers), and soldiers. Perceptions of the three groups were captured in terms of the need for, proficiency in, adequacy of resources available, confidence level, and emphasis placed on common task training within the unit. Value measurements for each of the current 80 common tasks were made in these areas. Lastly, comments from each group on the training

program were solicited. Descriptive statistics were used to measure frequencies, means, and percentages. Differences between the perceptions were noted.

The study found that officers and soldiers expressed stronger values of need than did the noncommissioned officers, although all agreed common tasks were needed. Officers expressed generally a lesser amount of proficiency in common tasks than did the other groups. Time was felt to be constrained by the officers. Facilities and resources to conduct the training were generally felt to be available. Emphasis perceptions differed in that officers expressed lower values of emphasis when compared with the perceptions of the other groups. The study showed the different key personnel involved in the education process on Skill Level One Common Tasks viewed the training from distinctive viewpoints. The perceptions captured should be of assistance to the unit in determining training strategy for annual programs.

Curry, R. J. (1986). The major sources and uses of agricultural credit as reported by lending institutions in a two county area of Oklahoma. Master's Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the major sources, availability and acquisition of agricultural credit in a two county area of Oklahoma. Financial institutions serving agriculture were identified by phoning the lending firms and determining those with agricultural loan portfolios. Representatives from 17 of the 18 identified lending firms agreed to participate in a personal interview. The survey instrument was a 24 item questionnaire. Descriptive statistics were employed to determine frequency distributions, percentages, and rank orders.

In terms of types of loans available, over three-fourths of the respondents indicated they made both real estate and chattel loans. Over 70 percent of the lenders making both real estate loans and chattel loans reported they had a maximum loan amount. Over two-thirds of the loans made for chattel mortgages had fixed interest rates. Over 88 percent of the financial institutions reported the incidence of foreclosure as being low to very low. Mismanagement and inadequate cash flow were the reasons most often cited. All lending firms indicated ability to repay was the most important loan consideration. Financial statements were required by all lenders. Most chattel loans were for purchasing livestock and farm machinery. Annual and semi-annual payment schedules were the most common methods of repayment. Adequate agricultural credit was available to producers showing repayment capacity. When seeking agricultural loans, producers should present a financial statement, cash flow plan, and previous years' production records.

DeMuth, B. J. (1986). A study of the factors that influence high school juniors and seniors to attend Indian Meridian AVTS. Master's Thesis, Oklahoma State University, Stillwater.

The major purpose of this study was to assess the factors that influence high school juniors and seniors to attend Indian Meridian AVTS and to determine the degree of influence of each of these factors. Data were collected by administering a questionnaire to all high school students enrolled at IMAVTS during the 1985-86 school year. Questionnaires were also completed by the IMAVTS administrators and the high school counselors or principals to compare perceptions of the student responses.

The largest percentage of students ranked the parents as the most important influence of people on their decision to enroll. Other important people influences were fellow students and former students of IMAVTS. The influence of the vo-tech teacher also was a strong factor to students who attended IMAVTS. Other important findings were the influence of modern, up-to-date equipment and machines, appearance of IMAVTS campus, and the tour of IMAVTS. Students also responded favorably to the desire to learn a trade, explore job opportunities, and to gain practical hands-on-experience.

Griffin, R. N. (1986). Perceived benefits of young farmer chapters for high school vocational agricultural/FFA programs in eastern Oklahoma. Master's Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine benefits accruing to high school vocational agriculture/FFA programs in Eastern Oklahoma as the result of conducting young farmer educational programs. Questionnaires were mailed in November, 1985 to the 72 teachers and 56 school administrators from those schools in the study area with active young farmer programs. The major areas of benefits incorporated in the instrument were educational, financial, parental support, and administrative support. The instrument was also designed to obtain information on specific benefits of young farmer programs and to allow for suggestions on possible improvements of the Oklahoma Young Farmer Association. Descriptive statistics utilized to describe the data were frequency distributions, percentages, and means.

There was close agreement among advisors and school administrators concerning benefits associated with young farmer chapters that benefit high school vocational agriculture/FFA programs. Active young farmer programs are an educational asset to the overall vocational agriculture program. Young farmer

members are supportive of financial demands of a vocational agriculture program. The initiation of a young farmer program increases parental support and administrative support of vocational agriculture programs while serving to improve the overall quality of the program. Public relations was the most important benefit to a local teacher and the vocational agriculture/FFA program as a result of a young farmer program. The local young farmer advisor should be regarded as the "key" person initiating and maintaining a young farmer program.

Harvey, L. R. (1986). Utilization of matching funds for vocational agriculture programs in Oklahoma. Master's Thesis, Oklahoma State University, Stillwater.

This study determined the number of vocational agriculture programs utilizing state matching funds and in what manner these appropriated funds have been used. Objectives of this study were to determine what percent of vocational agricultural programs are currently using state matching funds; to identify in what manner the funds are being utilized; to compare priorities in utilization; and to compare utilization of funds between single and multi-teacher programs. The 1985 responses from the mailed questionnaire consisted of 101 vocational agriculture teachers representing 18 single and 6 multi-teacher departments in each of the five supervisory districts with an 84.2% return from the 124 questionnaires mailed.

Results from this study were reported according to the objectives of the study. The state matching funds program is being utilized by vocational agricultural programs in Oklahoma. Participation among multi-teacher departments was 89.6% compared to 82.2% for single teacher programs over the past six years. The state matching funds program provided the purchasing power for vocational agricultural departments to improve and strengthen their classroom facilities, agricultural mechanics, and supervised occupational experience programs whether beginning or established programs. A definite difference was observed between single teacher and multi-teacher departments when classroom equipment purchases were inventoried. The multi-teacher departments purchased computer and VCR equipment at a 2 to 1 ratio compared to single teacher departments. A total overview did not express a statewide priority list for purchases since the purchases appeared randomly over the past six years.

Isoh, A. D. (1985). County extension agricultural agents' perceptions of the effectiveness of selected criteria for program evaluation in Oklahoma Cooperative Extension. Master's Thesis, Oklahoma State University, Stillwater.

The population of the study comprised all of the 77 county extension agricultural agents in all Oklahoma counties. Of the 77 counties, 71 agents responded. The questionnaire was administered to agents who were attending a state wide in-service training activity. They were requested to respond to a listing of 30 selected criteria for program evaluation by circling one of the five points on a Likert-type scale which best expressed their perceived "importance", and their perceived "effectiveness" on a similar scale. The frequency of the response and percentages for each item, as well as means for importance and effectiveness were calculated. Standard deviations were also calculated. Any of the selected criteria whose importance or effectiveness mean fell below 3.50 was considered as needing review, reassessment or improvement for future program evaluation.

Analysis of data revealed that of the selected respondent characteristics, only previous training in program evaluation had an effect on the way agents reacted to the questionnaire. Criteria found which were considered as needing improvement in importance for evaluation included, target audience identification, consideration of audience socio-economic characteristics, interpreting program outputs into documented reports, and using outcome reports for future program planning. Criteria considered needing improvement as to effectiveness by the agents included, target audience identification, developing programs jointly with county clientele, and consideration of audience socio-economic characteristics. It was concluded that there was need for agents to have continuing in-service training in program development including evaluation. All other criteria were perceived as being important and effective for evaluation.

Johns, S. K. (1986). Factors which influence vocational agricultural/FFA students in choosing Supervised Occupational Experience Programs. Master's Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine selected factors influencing vocational agricultural/FFA students in choosing Supervised Occupational Experience Programs. After reviewing the Oklahoma State Department of Education Annual Report, four school districts in each of the supervisory districts were selected. Selected schools were then designated as either "high" or "low" regarding school district expenditures per student. One hundred fifteen students, 71 males and 44 females, from each school's four vocational agriculture production classes participated in the study. Descriptive statistics were utilized to determine frequency distributions, percentages, and means. Questionnaires were mailed to 20 vocational agriculture departments during October, 1985.

The level of school district expenditures per student ranged from a high of over $22,000 to a low of less than $2,100 per student. Eighty-two percent of the respondents lived in a rural environment while more than two-thirds of the students' parents from this group were involved in farming. A comparison of male and female respondents revealed little difference in importance among parental influence, personal goals, and influence of the vocational agriculture teacher concerning the selection of student SOE programs. A major finding was, all students participating in the study were involved in some type of SOE program. Student respondents from school districts with either "high" or "low" levels of student expenditures had approximately the same number of participants in ownership SOE programs. Residential environment and/or land availability were not notable factors regarding student choice of SOE programs. Students were most active in SOE programs that pertained to livestock enterprises. There was little notable difference in regard to either gender or level of school district funding concerning student selection of SOE programs. Parents, personal goals, and vocational agriculture teachers had the greatest impact on student selection of SOE programs.

Kouplen, G. S. (1986). Vocational Agriculture teachers' and students' knowledge of credit and credit sources used to finance SOE programs in Okmulgee County, Oklahoma. Master's Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine how knowledgeable students enrolled in vocational agriculture in Okmulgee County, Oklahoma, are in the various ways of financing SOE Programs. To accomplish the goals of this study, the following objectives were formulated: (1) To examine the alternative ways students finance SOE Programs. (2) To determine how knowledgeable vocational agriculture teachers and students are in financing SOE Programs. A survey instrument was given to a total of seven vocational agriculture teachers and 282 vo-ag students out of an enrollment of 302.

Results of this study were reported according to the objectives of the study. Sources of financing SOE Programs was found to consist of mainly parents (61%) and banks (23%) for the students. Teachers responded that as youths in 4-H and FFA their sources were quite similar, with parents being used 71 percent of the time and banks 29 percent of the time. Other sources of financing were seldom used. Students did not feel that their instructors encouraged them to borrow money to finance their projects. However, teachers responded that they encouraged their students to use financing other than their parents. The need to

teach and learn credit procedures involved in borrowing money was expressed by both teachers and students.

McNutt, J. D. (1986). An assessment of the administrative competencies of County Extention Directors in the Oklahoma Cooperative Extension Service. Doctoral Dissertation, Oklahoma State University, Stillwater.

The purpose of this study was to determine the perceived level of importance and perceived level of competence that Oklahoma County Extension Directors possess in performing 45 selected extension administrative responsibilities, and to identify areas for emphasis in regard to administrative training. Questionnaires that outlined the 45 selected administrative items were given to 76 County Directors. Seventy-five Directors completed and returned the questionnaires for a 98.6% return rate. The respondents were asked to indicate their perceived level of importance and perceived level of competence for each item on a five-point "Likert" scale from "Highly Important/Competent" to "Not Important/Competent". Descriptive statistics, utilizing the means, frequency and percent were utilized for data analysis.

County Directors in Oklahoma generally perceived their assigned administrative responsibilities as important and generally perceive themselves to be competent in performing those responsibilities. Ten (22.2 percent) administrative responsibilities were identified as an area of emphasis for training. However, 11 items (24.4 percent) were items that the County Directors indicated they perceived themselves to be more competent than the responsibility was perceived important. This indicated that administrative training needs to be highly selective in nature. Directors with five or less years experience in that position had greater mean differences indicating that emphasis should be placed on training for that group. Little difference was found in responses by tenure, staff size, and administrative district. Directors with advanced degrees and those having 25 or more hours in the "social and behavioral sciences" perceived their competence level to be greater. Thirty-eight percent possess only a Bachelor's degree, indicating a need for graduate level courses in Extension administration and related course work.

Mutfwang, S. D. (1986). Perceptions of Agricultural Extension staff and Irish potato producers concerning training needs and mutual working relationships in the Mwaghavul Chiefdom of Plateau State, Nigeria. Master's Thesis, Oklahoma State University, Stillwater.

The main purpose of the study was to determine the perceptions of Irish potato producers and Agricultural Extension staff regarding production practices of Irish potato producers and the implications for mutual working relationships. Questionnaires were mailed to the area of study and data gathered.

The Agricultural Extension Agents all desired further training to improve their skills for better performance in working with farmers. It was evident from the study that there had been relatively frequent contacts between Agricultural Extension staff and the Irish potato farmers. However, there is need for more contact and need for stronger government backing of the Extension staff in their field work. The Extension staff and the Irish potato farmers would prefer to meet less than once per week with each other to share and gather information for improvement. Most farmers indicated that the Extension staff seemed unfriendly when approached by farmers facing problems. The conclusion of the study showed most Agricultural Extension staff had little experience, and there is a need to improve the working relationships between the farmers and the Extension staff.

Steward, J. K. Jr. (1986). Comparisons of program-completers' and leavers' perceptions of the Oklahoma farm business management program. Master's Thesis, Oklahoma State University, Stillwater.

This study was an attempt to determine if the Oklahoma Farm Business Management Program was meeting cooperators' educational needs and to determine future educational program and service needs for those cooperators who have completed or left the program. Data was collected by means of a mailed instrument designed to obtain cooperator demographic information, their perceptions of the program, their future educational needs, and why some departed the program before completion. All 356 former cooperators of the program from 1978 through 1984 were sent the survey instrument. A total of 175 former cooperators responded.

It was found cooperators had favorable attitudes toward the educational services, programs, and major topic areas offered by the program. The current design and structure of the program should be continued. Cooperators' age, farming status, major farm or ranch enterprise, and class meeting attendance were found to have an influence on their completion of the program. A majority of cooperators who left the program did so during or at the end of their first year in the program. The reasons given for departing the program did not indicate dissatisfaction with the program.

Wiryono, P. (1986). Impact of the implementation of the participatory approach by field extension workers on rice farming: a case study in the Daerah Istimewa Yogyakarta. Doctoral Dissertation, Oklahoma State University, Stillwater.

This study analyzed the extent of the implementation of the participatory approach by Field Extension workers (FEWs) and its effects on bringing about permanent changes in rice farming. It is a case study restricted to the Daerah Istimewa Yogyakarta, Indonesia areas, where farmers grow rice and are served by the T & V Extension System. There were 156 FEWs and 140 Contact Farmer Leaders involved.

Three groups of FEWs, named as Lower, Middle, and Upper-Group, as classified from 142 FEWs population due to the degree of the implementation of the participatory approach were subjects for the analyses. Various measurements were implemented. The emphasis was put on the comparison measurement of the specific characteristics and the degree of the working accomplishment of the three groups.

The Upper-Group exceeded the two other groups in most cases being analyzed: the implementation of the participatory approach, being familiar with farm life, living close-by, and knowing the working area, capabilities for developing farmer groups, perceiving positively the supporting agencies, and accomplishments of the seven selected extension targets. It appears that the effects of the implementation of the participatory approach were real and positive as they could be traced through the better performance of the Upper-Group and the well acceptance of the T & V Extension System by the farmers.

PENNSYLVANIA

Bierbower, J. H. (1986). Approved practice guide format for crop production in ornamental horticulture. Master of Education Paper, The Pennsylvania State University, University Park.

The study developed a standardized format for approved practices in ornamental horticulture with application as a written workbook or to a computerized system. Specific objectives were: (1) to develop a format for approved practices in ornamental horticulture useful in producing and evaluating Pennsylvania horticulture programs, (2) to develop a sample approved practice guide for broadleaf evergreen container stock, and (3) to evaluate the proposed ornamental horticulture approved practice format.

The ornamental horticulture approved practice format developed contained 13 major unit areas: propagation, growing mediums, plant environments, fertilization, pest control, irrigation and watering, growth control, transplanting, identification and selection, grading and harvesting, marketing, general management and horticultural mechanics. Seven experienced horticulture teachers evaluated the material. In general, teachers perceived the proposed approved practices format to provide the flexibility desired by local teachers and to contain appropriate technical content.

Dreibelbis, L. E. (1986). The development of a unit of instruction in small diesel engines. Master of Education Paper, The Pennsylvania State University, University Park.

The purpose of the study was to develop and field test the publication, Small Diesel Engine Student Handbook, which is used with the small diesel engine unit of instruction. The publication, which contains 13 problem areas, was written and then reviewed by four professional agricultural educators.

A vocational agriculture class was selected at the Middleburg High School and received a 40-hour course of instruction in small diesel engines. Each problem area was presented using written material, engines, tools, class or lab materials, quizzes, and a final problem area critique. When all problem areas were completed, a final examination and a final course critique were given.

The students' mean scores on the problem area quizzes ranged from 76.9 to 100. The final test score mean was 88.0. Students' interest in the course, as measured by a student critique, was measured at the end of each problem area, and the scores showed a mean range of 3.4 to 4.1. The end-of-course critique had a mean of 3.9 on a scale of 1-5.

Fleet, W. C. (1985). Determining the predictability of corn hybrid response in the field to selected herbicides using The Pennsylvania State University laboratory screening test. Master of Science Thesis, The Pennsylvania State University, University Park.

The three major study objectives were: (1) to determine if correlations existed between results of field tests for hybrid sensitivity to herbicides and the results of the Penn State Hybrid Screening Test for Herbicide Sensitivity; (2) to determine if certain environmental parameters (soil type, soil moisture, weather, etc.) correlate with corn hybrid injury; and (3) to assess adult farmer instructors' and county extension agents' awareness of corn hybrid/herbicide injury.

Field studies using the randomized split-plot design were conducted in 1983 and 1984 to develop a data base for correlation with the results of the Penn State Hybrid Screening Test for Herbicide Sensitivity. In addition, research was conducted examining the effects of various environmental parameters on herbicide injury in the 1984 field experiment.

Results showed that correlations between field test results and the results of the Penn State Hybrid Screening Test for Herbicide Sensitivity were low for metolachlor, alachlor, and budylate + R-25788. The correlation for EPTC + R-25788 was moderate. Significant differences among genotypes were found.

Environmental parameters such as soil moisture, soil temperature, and soil type were found to be significantly associated with injury. The significant regression model produced an R-squared value of 88.

Results from a survey of adult farmer instructors and county extension agents indicated that both groups had observed hybrid injury from herbicides, and that certain environmental parameters (cold, wet soils) were associated with this injury. Results also suggested that farmer mismanagement of corn herbicides was the number one cause of hybrid injury.

Guffey, C. B. (1986). Computer software development: an educational tool for teaching nutrition in Pennsylvania 4-H. Master of Education Paper, The Pennsylvania State University, University Park.

A computer program, Food for Someone Special: You, was developed to serve as a teaching supplement to the Pennsylvania 4-H project of the same name. The program uses graphics, text, and sound to supplement the user's knowledge of the basic nutrition concepts learned from 4-H projects or other nutrition education curriculum.

Emphasis is placed on the specialness of the user and the role that proper nutrition plays in keeping him healthy and at his best in all activities. Because the program begins with directions on how to use it, the user need not have previously used a

microcomputer. The program was designed to give the user opportunities to learn and use several basic microcomputer functions.

The program requires an Apple IIe microcomputer with 64k of memory, a monitor, and two disk drives. The length of time required to use the program is 30 to 50 minutes depending on the user's reading ability and previous microcomputer experience. The program was designed for third grade reading and ability levels. The computer program was designed as a teaching supplement. It should not be used as an end to itself, but as a unique method of supplementing traditional forms of nutrition education.

Harmon, H. L. (1985). Pedagogical inservice needs and activities of postsecondary agriculture instructors in the United States. Doctor of Philosophy Thesis, The Pennsylvania State University, University Park.

The primary purpose of this study was to determine the pedagogical inservice needs of postsecondary agriculture instructors in the United States. A secondary purpose was to identify the inservice activities available to the instructors.

A random sample of 430 postsecondary agriculture instructors representing 76 U. S. institutions was selected. Institutions were stratified into three types: Type I--offer postsecondary agriculture programs but award less than the Associate degree; Type II--offer postsecondary agriculture programs and award the Associate degree as the highest degree; and Type III--offer postsecondary agriculture programs and award, in addition to the Associate degree, baccalaureate or higher degrees.

Data were obtained from 71.2% of the sample and related to the 118 pedagogical competencies representing ten pedagogical areas: planning for instruction, teaching, evaluating instruction, program planning, guidance and counseling, management, public and human relations, professional role, student organizations, and coordination on-the-job (CO-OP).

Inservice education was needed for 26 competencies identified by instructors in Type I institutions; 25 competencies identified by instructors in Type II institutions; and five competencies identified by instructors in Type III institutions. Analysis of variance at the Scheffe posthoc analysis results revealed significant differences existed between instructors of the three types of instructions for 49 of the 118 pedagogical competencies.

When analyzing the pedagogical inservice needs of full-time and part-time instructors, full-time instructors indicated inservice education was needed for 17 pedagogical competencies as compared to three pedagogical competencies identified by part-time instructors.

The inservice activity "all-day program for full-time faculty" was most available to instructors in Type I institutions. For instructors in Type II institutions, the inservice activity most available at the institution was "faculty orientation

program." "Sabbatical leaves" were most available for instructors in Type III institutions. Part-time instructors rated the availability of seven inservice activities at their institutions significantly higher than full-time instructors. However, more than one-third of the part-time instructors did not know what inservice activities were available at their institutions.

Hastings, K. M. (1985). Regional extension advisory boards: their perceived effectivenes. Master of Education Paper, The Pennsylvania State University, University Park.

The purpose of the study was to collect benchmark information from three populations to assist in making regional Extension advisory boards (REABs) as effective as possible. The research questions were: Are there differences between the Regional Assistant Directors (RADs), County Extension Directors (CEDs), and Regional Extension Advisory Board members regarding: (1) the perceived knowledge of the Cooperative Extension Service (CES) by the REABs, (2) the perceived preparation and training of the REABs, (3) the perceived level of participation and involvement of the REABs, (4) the perceived level of influence exerted by REABs, and (5) the perceived effectiveness of REABs.

Questionnaires were mailed to 99 REAB members, 67 CEDs, and four RADs. Information was obtained from 80 REAB members, 61 CEDs, and four RADs. Attitudinal responses were recorded using a 5-point Likert-type scale. Selected demographic information was collected from REAB members in the study. The information was analyzed by comparing percentage distributions of the responses from the three populations.

The findings indicated that there were variations in the perceived knowledge of the CES by REAB members. Board members and CEDs perceived board members to have adequate knowledge and make valid decisions, but the RADs felt that board members did not. The three populations agreed the preparation and training of REAB members was inadequate.

Hatch, C. A. (1986). Trapping as a wildlife management tool: development and evaluation of an instructional video module. Master of Education Paper, The Pennsylvania State University, University Park.

The purpose of this study was to develop and evaluate an instructional video module focusing on the use of trapping as a tool for wildlife management. It was theorized that exposure to the video module would influence the viewer's attitudes and knowledge of trapping.

This study involved 107 individuals in the Cooperative Extension Service 4-H Youth Program. Both 4-H leaders and 4-H youth were used as subjects for this study. The subjects were randomly selected from stratified urban, rural, and other counties in Pennsylvania.

The 4-H groups were tested to determine knowledge and attitudes before exposure to the video module. The respondents viewed the video and were retested to evaluate the effectiveness of the video module in increasing knowledge and positively influencing attitudes concerning trapping as a wildlife management tool.

Analysis of variance (ANOVA) was used to determine if differences in attitudes and knowledge were significant among localities (urban, rural, and other) or because of exposure to the video module. Four hypotheses were formulated and tested. The major finding of this study revealed that viewing the video module significantly increased the participant's knowledge and attitude scores.

Hlope, D. K. (1985). A communication strategy for agricultural extension education in the rural development areas of Swaziland. Master of Education Paper, The Pennsylvania State University, University Park.

Swaziland's agriculture is dualistic. There is a modern sector composed of large-scale commercial farms and a traditional sector that consists of small-scale subsistence farmers. The latter sector has been neglected by the agricultural researchers for too long (up until the late 1960s). It remained unimproved while the commercial sector advanced. This led to the widening of the economic gap between the two sectors.

To improve the traditional sector, the government established the Swaziland Cropping Systems Research and Extension Training Project. The project emphasizes on-farm research, an approach that requires the researchers and farmers to work together in finding solutions to farming problems.

The purpose of this paper was to develop a communications model to be used by the Information Section of the Ministry of Agriculture and Cooperatives for disseminating agricultural information. The model developed for this purpose was the Communications Programming Model, a modification of the Burger and Duvel Model designed for teaching extension in Southern Africa.

Incorporated in the model was a communication strategy to be used by the Information Section to identify farmers' needs and to coordinate all information transfer activities within the Ministry, including the transfer of research recommendations from researchers to extension agents.

Howard, J. M. (1986). Effectiveness of two instructional modes for teaching vocational agriculture students of differing learning styles. Doctor of Philosophy Thesis, The Pennsylvania State University, University Park.

A major factor affecting the effectiveness of particular teaching methods and strategies relates to differing ways individuals learn (learning styles).

The primary purpose of this controlled teaching experiment was to assess whether students' learning styles (field-dependent or field-independent) infuenced the effectiveness of two teaching methods (microcomputer-assisted instruction and lecture-discussion instruction) for teaching the use of the micrometer to ninth grade vocational agriculture students. A subsidiary purpose was to examine differences in students' learning styles with regard to age, sex, agricultural background, previous microcomputer experience, vocational agriculture grade, and class rank in school.

The population for this true experimental posttest-only control-group design consisted of 137 ninth grade vocational agriculture students in three central Pennsylvania counties: Blair, Centre, and Huntingdon. A census of the population was used, and students were randomly assigned to one of two treatment groups, a microcomputer-assisted instruction section or a lecture-discussion instruction section. Ninth grade field-independent vocational agriculture students, in the lecture-discussion section, scored significantly higher on the first posttest performance component score and total test score than the field-independent learners in the microcomputer-assisted section and the field-dependent learners in either section.

Ninth grade field-dependent vocational agriculture students, in the microcomputer-assisted section, scored significantly higher on the second posttest performance component score than the field-dependent learners in the lecture-discussion section.

Ishman, D. A. (1986). A cost comparison study of vocational agriculture programs in Pennsylvania. Master of Science Thesis, The Pennsylvania State University, University Park.

The purpose of this study was to identify vocational agriculture program costs in five major areas: employee costs, purchased services, supplies, property, and total program expenses.

Procedures involved collecting available data from the Pennsylvania Department of Education and obtaining program enrollments from the Vocational Education Management Information System reports. The data for 121 schools were analyzed to determine cost differences between vocational agriculture programs located at comprehensive high schools compared to area vocational technical schools. The data were also analyzed to compare single- and multiple-teacher departments and to compare vocational agriculture programs by intermediate unit.

In comparing comprehensive high school programs to area vocational technical school programs, it was found that comprehensive high schools had lower employee costs, supply costs, property costs, and lower total program costs. Comprehensive high schools had a higher purchased service cost than vocational technical schools.

Jochen, D. M. (1986). The development of a program for microwave oven users. Master of Extension Education Paper, The Pennsylvania State University, University Park.

This paper presents a review of the research conducted regarding the microwave oven, and presents a basic educational plan for initiating a consumer microwave oven cooking program for the Pennsylvania Cooperative Extension Service. By examining the vitamin and mineral retention of cooking vegetables and meats in the microwave oven, baked product evaluation, palatability comparisons, food safety and use of the appliance, it is shown that much has been done in the technical field of food science, but little has been published regarding microwave oven cooking education.

Although microwave cooking education programs are examined and cited, general, practical, printed information is very limited. The need for consumer assistance in using and operating the appliance is pointed out, not only because the method of operation is new, but also because of limited information and/or resources. The general acceptance and ownership of the microwave oven is shown by the buying trends and overall enthusiasm towards information and classes.

A basic educational outline is presented for initiating consumer microwave oven cooking presentations in the Pennsylvania Cooperative Extension Service program. Suggestions are made for a series of demonstrations with resource information, evaluation and handouts for the clientele.

Kramer, L. M. (1986). The development of a 4-H dairy cattle judging manual. Master of Education Paper, The Pennsylvania State University, University Park.

Pennsylvania ranks as the fifth largest dairy state. This fact has been recognized by the Pennsylvania Cooperative Extension Service; therefore, they have incorporated dairy projects into their curriculum. Dairy cattle selection is one area neglected in the publications provided by Extension.

This paper developed a dairy cattle judging guide to be used by those Pennsylvania 4-H youth, between the ages of 13 and 19, interested in dairy cattle selection. The manual contains the following areas: breeds of dairy cattle, parts of the cow, score card, judging heifers, evaluation of defects, judging cards, contest points and cuts, judging fundamentals, terminology, reasons and practice classes.

The completed manual was reviewed by 14 individuals ranging from dairy specialists to 4-H members. Feedback indicated that the developed manual filled a definite need by 4-H youth.

Kring, K. M. (1985). Production goals and efficiency factors for crops commonly grown in Pennsylvania vocational horticulture/ agriculture program greenhouses. Master of Education Paper, The Pennsylvania State University, University Park.

The purpose of this study was to identify production goals and efficiency factors for greenhouse crops commonly grown in Pennsylvania vocational horticulture programs. The first step involved determining which crops were commonly grown. This was accomplished by surveying a population of selected teachers of greenhouse crop production in Pennsylvania vocational horticulture/agriculture programs. A list of commonly grown crops (grown by 50% or more of respondents) and associated efficiency factors was then presented to selected Pennsylvania commercial greenhouse operators to determine their crop production levels.

Data from the survey of greenhouse operators were compiled and means were computed for each efficiency factor by crop. Means were calculated for five efficiency factors for potted crops and four efficiency factors for cut flower crops.

Recommendations for efficiency factors and standards were then developed based on the survey results. Efficiency factors selected for use measure both the quantity and quality of a crop, are easy to determine, and open to comparison. Standards are set forth for both average and superior production levels. Efficiency factors and standards are recommended for these crops: bedding plants, Christmas cactus, chrysanthemum, daffodils, Easter lily, foliage plants, fuchsia, geranium, hyacinth, poinsettia, tulips, cut carnations, cut chrysanthemums, and cut snapdragons.

Shaner, S. M. (1986). An educational demonstration of innovative grazing management to aid in controlling parasitism in sheep. Master of Education Paper, The Pennsylvania State University, University Park.

The purpose of this study was to determine the effect of grazing management for control of nematode parasitism in sheep. A secondary purpose was to determine if levels of parasitism had effects on weight gains when combined with different grazing practices. An alternative to the frequent use of anthelmintics is the use of safe pasture, determined as those forages not grazed by sheep for a period of at least one year. The time chosen for this study was known to be a critical time when lambs typically develop massive parasite burdens. Because highest death losses to parasites occur in lambs, it is critical that innovative practices in controlling parasites be evaluated. The educational purpose was to develop classroom data in the form of growth weight charts and fecal parasite level charts for learning experiences.

Forty crossbred lambs were purchased from private sources. The lambs were observed and monitored for one month prior to the experiment for evidence of infectious disease as well as degree of parasitism. The 40 lambs were randomly divided into three

treatment groups. Group one was placed on a pasture known to be contaminated with sheep nematode parasites and treated with an anthelmintic when weekly fecal egg counts reached 6,000 eggs/gm feces, a level known to cause a health threat. Group two was placed on a pasture known to be contaminated with sheep nematode parasites and treated with an anthelmintic when weekly fecal egg counts reached 1,000 eggs/gm feces, a level known to affect production. Group three was placed on a safe pasture seeded with a brassica mix and treated with an anthelmintic when weekly fecal egg counts reached 1,000 eggs/gm feces.

The McMaster's Egg Counting Technique was conducted in The Pennsylvania State University Animal Diseases Laboratory to confirm parasite levels. Levasole anthelmintic was administered at a rate of 8 mg/kg, as required by experimental guidelines. The lambs were placed on pasture for a ten-week period of time when parasite burdens were known to be greatest.

The results of the study indicated that animals grazing brassica pasture gained more weight than animals grazing contaminated pastures. It also was found that animals grazing brassica pasture did not require anthelmintic treatment until four weeks later than those grazing contaminated pasture.

Welshans, J. E. (1985). The Pennsylvania State University cooperative extension service promotion system 1975-1981. Master of Education Paper, The Pennsylvania State University, University Park.

The purposes of this study were: (1) to review the promotion system of the Pennsylvania Cooperative Extension Service from 1975-1981; (2) to determine if this system has been perceived effective by the participants involved at all levels of the system; and (3) to recommend needed changes, if any, to make the system more effective.

A county staff survey was conducted to determine the perceived effectiveness of the promotion system enacted in 1975. The survey was conducted by telephone and personal interviews. The sample was identified by stratifying county agents by their present rank. Ten agents were randomly selected from each of the four ranks. Four regional assistant directors (RADs) were also interviewed.

In reviewing the new promotion system, county staff felt the system was ineffective. Eighty-two percent of the respondents in this study perceived this system has been administered unfairly. Also, 75% of the respondents wanted additional assistance in preparing dossiers for promotion. Even with these negative feelings towards the present system, 80% of the respondents favored this system over the system used prior to 1975.

Recommendations from the study indicated that for the new promotion and tenure system to be effective the following must occur. First, the program must be administered fairly. This can be done by using the word "ordinarily" equally at each level of rank within the promotion system with regard to graduate credits

needed for advancement or to eliminate the word from the written requirements. Secondly, assistance must be provided to those persons preparing their dossiers for promotion. This must be done by administration so each individual receives the same information. Preferably, this would be done by one person, who would also work with the Promotion and Tenure Review Committee.

Wickramasuriya, H. V. A. (1985). The identification of focal individuals and the analysis of communication networks in four Sri Lankan villages. Doctor of Philosophy Thesis, The Pennsylvania State University, University Park.

The study evaluated the efficiency of seven methods of selecting communication focal individuals (FIs), ascertained the degree of common focal individuals and common communication links, and explored the effect of gender on rural women's contacts.

The study was conducted in four types of villages in Sri Lanka. Two were new villages within the major Mahaweli settlement scheme. In one the settlers originated from one original village, and in the other new village (NDV) settlers originated from different original villages. Two were old villages, one within the Mahaweli scheme, and the other not. All household heads were interviewed. Women in one village were interviewed.

The methods compared for identifying focal individuals were: the Contact Farmer method (appointed by extension agents); the Turn-Out Leader method (elected by farmers); the village leaders and government officials method (identified by selected village leaders and local government officials); 10%, 20%, and 30% random sample methods; and the snowball sample method. Among these methods the presently used Contact Farmer method was the least effective for identifying focal individuals. The village leader and government official method was the most effective and was recommended for future use. The Turn-Out Leader method was the second most effective. Within the Contact Farmer method, selection was more effective in the older villages. No differences were seen among the results for the four sampling methods.

To determine the occurrence of common FIs and links, data on communication for simple agriculture, complex agriculture, financial services, community developemnt, and general friendships were gathered. In the two new villages, there was a higher occurrence of common FIs. In the two old villages, there were two different sets of leaders for agriculture and community development information, and thus the use of different leaders was recommended.

SOUTH CAROLINA

Owens, Emma McIntosh. (1986). Prediction of success in entry level Mathematics courses at Tri-County Technical College. Doctor of Education Dissertation, Clemson University, Clemson.

The process of placing students in the proper entry level mathematics course is an ongoing concern. This is especially true of an open-door institution like Tri-County Technical College where this study was conducted. The placement procedures used at Tri County Technical College have not always placed students in courses where they experienced the most success. This study was conducted to determine if a combination of variables using accessible data could be utilized in the formulation of a predictive equation for entry level mathematics courses.

Four subtests of the Career Ability Profiles Survey (CAPS) were administered to 212 students in three entry level mathematics courses during the fall quarter of 1984. These students were also administered the Tennessee Self-Concept Scale. Age, MAA placement test scores, reading and writing scores were also compiled. Correlation and regression analyses were performed on the collected data using the Statistical Analysis System (SAS). Stepwise MAXR regression techniques were used to determine the best predictive equation for each course.

Six hypotheses were statistically tested in this study. Results showed that age was the most consistent predictor. CAPS scores of language usage, mechanical reasoning, verbal reasoning, and numerical ability showed significant positive correlations with course grades and were utilized in predictive equations. Predictive equations were developed and presented in this study for the three entry level mathematics courses.

Miller, James Cleo, Jr. (1986). South Carolina legislators' perceptions of the Clemson University Cooperative Extension Service. Doctor of Education Dissertation, Clemson University, Clemson.

The purpose of this study was to determine the perceptions held by members of the 1985 South Carolina Legislature of the Clemson University Cooperative Extension Service (CUCES), as related to purpose and objectives, participation and involvement in programs and activities, basic program areas, and clientele. The study also sought to determine the association between legislators' perceptions of certain elements of CUCES and their role in the legislature, years of legislative experience,

political party affiliation, place of residence, character of district, age, and occupation.

A mailed questionnaire was used to collect information from the legislators. The entire population of legislators (170 members) was surveyed in the study. Usable data were obtained from 111 members (65 percent) of the legislature. The statistical analysis included the Chi-square test of independence.

Each of the seven selected variables was significantly associated with at least one or more of the elements of perception examined. Party affiliation, place of residence, and character of district exerted the greatest influence on the legislators' perception of the CUCES.

Data indicated that legislators had limited understanding of the major mission of the CUCES. The legislators who resided in rural areas and represented rural areas had greater participation and involvement in Extension Service programs and activities.

The data showed that legislators were only somewhat familiar with the four basic program areas. They were more familiar with the agriculture and 4-H program areas than the home economics and community development program areas. The two former areas were ranked as more important than the two latter areas.

The findings revealed that legislators considered the clientele groups associated with agriculture as the organization's most important. Legislators perceived the CUCES as a rural, agriculturally oriented organization.

The following recommendations were offered.

1. The Extension Service needs to strengthen and improve its image with legislators.
2. The Extension Service must make an effort to involve both urban and rural legislators in programs and activities.
3. The Extension Service should increase legislative briefings and lobbying efforts to include activities and accomplishments.
4. The Extension Service must adopt techniques for greater public recognition by urban populations and their legislators.

Taylor, Linda Marianne. (1986). Brain dominance and learning style preference: Their relationship to student success in selected classes at Tri-County Technical College. Doctor of Education Dissertation, Clemson University, Clemson.

Nontraditional students, the open door policy, accountability, cost effectiveness, and excessive teaching loads have often frustrated community college educators in their attempts to ensure optimum learning for their students. Modern research on the brain and learning has suggested that knowledge of

students' brain dominance and learning style preference might enable educators to maximize students' learning opportunities.

To permit examination of the impact of brain dominance and learning style preference upon classroom success, 428 students and 19 instructors in selected classes in the Arts and Sciences Division at Tri-County Technical College in Pendleton, South Carolina supplied demographic data and completed Kolb's Learning Style Inventory (LSI) and Torrence's Human Information Processing Survey (HIP Survey). The results of the LSI and the HIP Survey were used to determine each subject's brain dominance and learning style preference. The brain dominance, learning style preference, demographic data, and the students' final course grades were then tested using analysis of variance, frequency distributions, and contingency tables to determine the relationships among the variables and success in the classroom (a grade of at least C).

The study yielded the following results:

1. Brain dominance and learning style preference did not influence classroom success.
2. A relationship among students' and instructors' brain dominance and learning style preference did not influence classroom success.
3. A relationship among sex, age, brain dominance, and learning style preference did not influence classroom success.
4. Learning style preference was not influenced by race.
5. Brain dominance was influence by race.
6. Students' choice of major was not related to brain dominance nor learning style preference.
7. The student sample was predominantly mixed brain rather than left brain dominant.
8. The sex of the students did affect classroom success.

TENNESSEE

Lamberth, Edwin E. (1986) Determining perceptions of vocational agriculture teachers toward supervised occupational experience programs in Tennessee. Staff study, College of Agriculture and Home Economics, Tennessee Technological University, Cookville.

The purpose of the study was to determine the perceptions of high school vocational agriculture teachers of supervised occupational experience programs (SOEP's) in Tennessee. Population for the study consisted of all Tennessee teachers listed in the 1984 Agriculture Teachers Directory. A survey instrument was developed and refined by the Tennessee Joint Staff for Agricultural Educaton. The instrument was mailed to 214 teachers. Approximately two months after mailing the instrument, a follow-up letter was sent to each teacher who had not returned the instrument. Eighty-eight, or 41.1 percent, of the teachers of vocational agriculture returned the survey instrument. Responses of the teachers were analyzed using descriptive statistics and frequency distributions.

Findings of the study: (1) Thirty-five percent of the teachers stated that SOEP's were required for enrollments in vocational agriculture; (2) More than 96 percent of the teachers were employed during the summer months, but only 77 percent were provided travel compensation by local school systems for visiting SOEP's; (3) Forty-one percent of the students did not have adequate facilities at home for SOEP's; (4) Eighty-five percent of the students belonged to the Future Farmers of America (FFA); (5) Sixty-eight percent of the FFA members had SOEP's; (6) Production agriculture was the most common type of SOEP conducted by the students; and (7) Teachers felt that the SOEP assistance they provided their students was inadequate.

TEXAS

Briers, Gary E., Dayberry, D.T., and Reap, M.A. (1986). Identification of mathematics and science concepts, skills, and experiences provided in vocational agriculture in Texas. Texas Education Agency Funded Project, Texas A&M University, College Station.

The objective of the study was to determine the extent to which vocational agriculture in Texas provided opportunities for students to develop concepts and skills in mathematics and science. This objective was accomplished in a two-stage effort: (1) Teachers of science and mathematics served on a jury to examine the instructional materials for the vocational agriculture basic curriculum in Texas. From this examination, the science and math teachers identified the "essential elements" in science and mathematics available through the materials. In other words, if students were taught the information in the vo-ag materials, they would be provided opportunities to develop specific concepts and skills in science and mathematics. (2) The second stage of the study was to survey teachers and students of vocational agriculture to determine the extent to which they were teaching and learning, respectively, the materials in vo-ag that had been identified as "containing" mathematics and science essential elements. Finally, one could deduce that (1) if the materials covered math and science and (2) if teachers were teaching and students were learning from these vo-ag materials, then the students must be learning concepts and skills in mathematics and science.

Findings were as follows: (1) Teachers of science identified 141 of 189 topics (75%) in vocational agriculture as providing opportunities for students to develop concepts and skills in science. (2) Teachers of mathematics identified 123 of the 189 topics (65%) as containing mathematics concepts. (3) Collectively, 49 of the 189 topics (49%) contained both science and mathematics, according to the science and math teachers. Similarly, 173 topics (92%) contained either math or science. (4) Both teachers and students of vocational agriculture reported that teaching and learning of the topics were occurring. So, the deduction was made that students in vocational agriculture were learning basic concepts and skills in science and mathematics.

Dreisbach, Peter. (1985). Readjustment and life satisfaction of international students in agriculture when returning to a developing country. Doctoral Dissertation, Texas A&M University, College Station.

The study was to identify and compare anticipated and actual life satisfaction and readjustments as perceived by bachelor and graduate degree level international students returning to developing countries after studying agriculture in the United States. Specific objectives were: (1) to determine differences in perceived future life satisfaction and readjustment of soon-to-be-returning foreign students from developing countries and those who had recently returned home; (2) to determine relationships between perceived life satisfaction, readjustment, and 17 independent personal and situational variables.

Findings were based on questionnaires returned by 369 international agricultural students who were to return home within a year and by 116 similar students who had returned home within the previous year.

Pre-departure international students perceived that they would be more highly satisfied with their life than did post-departure international students. Life satisfaction was related to region of origin, official and instructional language background, age, primary sponsorship, and marital status. Social and cultural readjustment was related to region of origin, official and instructional language background, and participation in a reentry program. Professional and educational readjustment was related to region of origin, official and instructional language background, primary sponsorship, and level of degree earned. National and political readjustment was related to official and instructional language background, job assurance, immediate employment, length of sojourn, self-perceived command of English, participation in a reentry program, and primary sponsorship. Composite readjustment was related to region of origin, official and instructional language background, immediate employment, primary sponsorship, and level of degree earned.

Ede, Christian. (1985). An analysis of agricultural mechanization training programs in schools of agriculture in Nigeria. Doctoral Dissertation, Texas A&M University, College Station.

The purposes of this study were: (1) to determine the present status of agricultural mechanization programs designed for Agricultural Assistants in schools of agriculture in Nigeria; and (2) to determine future orientation of agricultural mechanization programs designed for Agricultural Assistants by those institutions.

The population was delimited to all (24) instructors of agricultural mechanics teaching in Nigerian schools of agriculture (1984-85). A questionnaire was used to collect data. All instructors responded.

The major findings were: (1) Agricultural mechanization programs received a "low priority" when compared to other programs in various institutions; (2) A majority of the instructors perceived a lack of adequate level of skills, competence, and experiences in agricultural mechanics; (3) All the major units of manipulative skills pertaining to tractor-powered technology were presently not stressed, but all units should be stressed; (4) A majority of the instructors perceived that they possessed an inadequate level of skills and competence to perform 11 of the 15 major units of skills, namely, air conditioning (91.3%), engine overhaul (75%), final drive (75%), differential system (66.7%), electrical system (66.7%), brake system (58.3%), clutch (58.3%), hydraulic system (58.3%), transmission (58.3%), air and exhaust system (54.2%), and power take-off (54.2%); (5) All instructors indicated a strong desire to undertake more training to up-grade their skills; (6) A positive correlation existed between what was presently taught and the level at which it should be taught for all 14 units of tractor-powered technology; (7) For what was recently taught, and the level of skills possessed by the instructors, a negative correlation existed for air conditioning and fuel system units, no correlation existed for transmission and wheels and tires, and positive correlations existed for the remaining ten units of skills; (8) Instructors indicated a serious inadequacy of resources, the need for more hours of practical exercise in the curriculum, and the need for more trained manpower to work in the field of agricultural mechanization.

Ensley, T.L. (1986). Relationship between adults' reasons for participation in non-credit classes in community colleges in Texas and temporal orientation (time perspective). Doctoral dissertation, Texas A&M University, College Station.

The study was to determine if there were a relationship between persons' participation in classes of adult education and

their respective temporal focus (time orientation). Research questions addressed were: (1) For which of the reasons identified by Boshier (1977) do individuals engaged in non-credit classes for adults at community colleges participate in programs of adult education? (2) What is the temporal orientation focus of the adults engaged in non-credit education classes at community colleges? (3) Is there a relationship between any of the four independent temporal orientation variables of focus, activity, structure, and tenacity, and any of the six dependent participation variables of social contact, social stimulation, professional advancement, community service, external expectations, and cognitive interests? (4) If such a relationship exists, is it stronger than a relationship among other selected variables, such as age and gender, and reasons for participation?

Data were obtained by questionnaires from 233 adults enrolled in non-credit classes in three community colleges in Texas in 1984. The reliability for the scales of both dependent and independent variables was checked. Canonical correlation and multiple regression statistics were used.

Professional advancement and cognitive interests were greater reasons for participation than were social contacts, social stimulation, community service and external expectations. Participants were best described as future oriented and not past oriented. Those participants who were future oriented were likely to participate to improve social contact, to improve community service, and to improve external expectation. Those who were past oriented were also likely to participate in programs of adult education to improve social contact and to improve external expectations; but they also participated to improve their social stimulation. A relationship existed between temporal focus and factors of participation and was more consistent than the relationship between temporal focus and selected demographic variables.

Fraze, Steven D. (1986). <u>The relationship of participation in selected FFA activities with career choice and job satisfaction of program completers of vocational agriculture in Texas</u>. Doctoral Dissertation, Texas A&M University, College Station.

The purpose of the study was to identify any relationship between participation in FFA activities and subsequent career choice and job satisfaction of program completers of vocational agriculture in Texas. From a population of approximately 7000

high school graduates in 1980 who completed vo-ag programs, 290 former students were sampled.

Findings were as follows: (1) Females completing programs of vocational agriculture in 1980 had increased more than fivefold from five years earlier--18 percent compared to 3 percent. (2) Approximately 60 percent of program completers received post secondary education. (3) Program completers of vocational agriculture had a high employment rate (99%). (4) Job satisfaction scores for program completers were high for general and intrinsic job satisfaction and average for extrinsic job satisfaction. (5) Program completers who had high levels of participation in FFA activities were more likely to enter agricultural occupations than were those who had low levels of participation. (6) Program completers who participated in a balanced program of FFA activities tended to enter agricultural occupations at a significantly higher rate than did those who had high participation in one activity. (7) There was negligible correlation between levels of participation in FFA and job satisfaction of program completers.

Townsend, J. D. and Fitzwater, B. K. (1986). Implementation Model for Pre-Vocational Agriculture.(Grade Level 7-8). Staff Study. Texas A&M University, College Station.

Students in Texas Schools are having to decide sooner than ever their career choices. Pre-vocational and career exploration courses have been implemented to help with career decisions. A basic curriculum guide for pre-vocational agriculture was developed to help teachers and students explore opportunities in over 200 agricultural related careers.

Four hundred seventy four (474) responses were returned from a survey of vocational agriculture teachers. These teachers indicated that slightly less than 50% (213) provide pre-vocational agriculture to students in their schools. One thousand fifty two (1052) students are served in pre-vocational agriculture classes at this time.

A informal survey of other states indicated educators are also trying to develop curriculum and implement pre-vocational agriculture classes within their states. Several of the states contacted have joined with the AG IN THE CLASSROOM project within their state to provide materials for 7th and 8th grade agriculture.

Townsend, J.D. (1986). Integration of computer related agriculture instruction in Texas Community/Junior Colleges. Staff study. Texas A&M University, College Station.

There are 26 community/junior colleges teaching agriculture in Texas. Educators in these community/junior colleges are using computers in their instruction, but not to the extent that they could be. There are three main types of microcomputers being used; Apple II series, Tandy Models 3 & 4, and the IBM or IBM compatibles. Software varies with the college but can be divided into three areas; word processing, data base management, and spread sheets. There are four university transfer courses in the agricultural sciences group namely; animal science, agronomy, agricultural economics, and agricultural industry. There is not a coordinated effort between the colleges to use computers to aid the instruction of agriculture in these basic courses.

Computer educators should be reminded the computer is a tool for learning, not a subject to be studied. Specifically, students need to view the computer as a way of solving problems. The application of available agriculture software should be encouraged by A&M and should also be developed to aid in the instruction of the basic transfer courses in agriculture. This would assist the instruction at the community/junior college level and establish a uniform standardized core curricula in the basic courses. Hopefully this standardization would benefit the transfer students and encourage the promotion of the 2+2 program; therefore, increasing the number of recruits from community/junior colleges.

Mittelsdorf, Christina Ann. (1986). An Analysis of the Texas Vocational Agriculture Essential Element Competency Profile Ranking Scale. Master of Science Thesis, Stephen F. Austin State University, Nacogdoches, Texas.

The purpose of this study was to determine the accuracy of the essential element competency profile, four point ranking scale used in Texas schools to predict job readiness. A three-way analysis of covariance was used to determine if significant differences existed in the profile rankings of ten selected agricultural mechanics competencies as ranked by Vocational Agriculture instructors, students themselves, and the researcher. Five competencies were within the cognitive domain and five were within the psychomotor domain. The interaction effect of competency type (cognitive or psychomotor) and ranking method (teacher, student, researcher) was also measured as were correlations between the instructor's raw test scores and their final competency profile ranking. The population for this study consisted of 47 vocational agriculture departments teaching Vocational Agriculture III. Seven schools were selected and intact classes were used to teach the 10 selected agricultural mechanics topics in Agricultural Electrification. All measures for job readiness were made following the two week instructional period.

Both instructor and student ranked cognitive and psychomotor profile scores were significantly higher than researcher ranked cognitive and psychomotor profile scores. There were interactions between researcher and student scores and between instructor and student scores, but they were not significant. A linear relationship was found between the instructor's raw test scores and their cognitive and psychomotor profile rankings, but R^2 values of .32 and .22 indicated the other test scores were not good predictors of perceived job readiness as indicated by the final competency profile ranking.

VIRGINIA

Camp, W. G. (1986). A national study of the supply and demand for teachers of vocational agriculture in 1985. Staff study, Funded by the Agricultural Education Division, American Vocational Association. Virginia Tech, Blacksburg.

This was the twenty-first annual "Supply and Demand" study conducted by the profession. Head teacher educators in agricultural education in all institutions in the United States and state officials having responsibility for programs of vocational agriculture were surveyed. After 4 written followups, numerous personal contacts, and two telephone followups, a 100% response rate was obtained. The most important findings of the study were 1. The percentage of agricultural education graduates entering teaching was the lowest in the study's history (40.8%). 2. There was a severe loss in teaching positions nationally, largely resulting from a 99 position loss in Texas. 3. Even with the growth in recent years of extension education programs, nationwide only 29 graduates were placed in extension positions. 4. The teacher shortage of years past, appeared to be a teacher surplus in 1985.

Camp, W. G. (1986). Student misbehavior and job satisfaction among vocational agriculture teachers: A casual analysis. Staff study. Virginia Tech, Blacksburg.

A systematic sample with a random start (n=605) of all vocational agriculture teachers in America (N=12,726) was surveyed to determine their levels of perceived discipline problems and job satisfaction, using existing instruments. An effective response rate of 72% was obtained. Path analysis techniques were used to establish the strength of the casual relationship from discipline problems to job satisfaction, with the effects of several external variables partialed out. The study found a substantive negative linear effect of discipline problems on job satisfaction, with a somewhat less substantial positive curvilinear effect resulting from the square of the discipline rating.

Camp, W. G. (1986). Virginia Ag Ed NETWORK. Staff study, Funded by the Virginia Department of Education. Virginia Tech, Blacksburg.

The Virginia Ag Ed NETWORK is an electronic educational telecommunications network for Virginia agriculture teachers

and students. It is not a part of, nor affiliated with any other system. The system is based on a 640K IBM PC with a 2M hard disk and a 300/1200 baud external modem. The software to operate the system was modified from public domain software to provide the specific services on the NETWORK. The NETWORK contains a teacher news board, an FFA/YF news board, lesson plans, tests, instructional material, competency checklists, learning activity packages, and software reviews. It has full upload/download capabilities and contains a function for sending messages to the operator. It is NOT a bulletin board or an electronic mailing system. There is no fee for users and anyone may use the system without prior permission. The NETWORK telephone number is (703) 961-6836.

Camp, W. G.; Hillison, J.: & Jeffreys, B. J. (1986). Identification of the leading teacher education programs in agricultural education in America and examination of the reasons given for rankings. Staff study. Virginia Tech, Blacksburg.

A randomly selected sample (n=162) of all teacher educators in agricultural education (N=324) was surveyed. Respondents were asked to list the ten programs they considered the top programs in the nation and indicate the reasons for each program's selection. A total response rate of 77.2% and a usable response rate of 69.1 were obtained. The reasons were analysed using manual content analysis techniques. The rankings were analysed using simple descriptive statistics. The most important category of reasons for a program's being listed in the top ten was "faculty: perceived quality, size, imminence, stability, and dedication." Other reasons prominently mentioned were: graduate program, national visibility, undergraduate program, and service both in-state and regionally/nationally.

Crunkilton, John R. (1986). Graduate programs of international students studying agricultural education in the United States with implications to the international training program at the American Farm School in Greece. Funded by the American Farm School, Greece. Virginia Tech, Blacksburg.

The purposes of this study were to review graduate programs of international students studying agricultural education in the United States with implications to the international training program at the Farm School and to determine student interest in attending such a training program. The population for this study were international students enrolled in agricultural education or extension

graduate programs in the United States 1986. A survey instrument was sent to these students with one follow-up.

The findings of the study indicated students were satisfied with their graduate programs in the U.S., not taking courses in counseling students, working with special needs or financing education. They also identified courses and practical experiences desired. Ninety-three percent of the students expressed an interest in the training program at the Farm School.

Ewang, Peter N. Criteria for assessing the cooperative extension program planning process in West Central District of Virginia. Doctoral Dissertation, Virginia Polytechnic Institute and State University, Blacksburg.

The purpose of this study was to formulate criteria for assessing the local cooperative extension program planning process in the West Central Extension district of Virginia. The identified essential extension programming principles were sent for verification to a panel of 8 persons who were selected to act as experts. Criteria were formulated based on the verified principles and these were also sent to the same panel of experts for them to verify. A random sample of 10 extension units from the 18 units in the West Central extension district of Virginia was used for field testing. Unit directors of the selected units were interviewed using the formulated criteria to determine the degree to which the criteria were used as guides during the local extension program planning process. Mean weighted scores and descriptive statistics were used in analyzing and interpreting the data generated by the rating of importance and use made of each criterion in program planning.

Six of the seven statements were accepted as principles for planning effective local extension programs. Eighteen formulated criteria were identified as useful standards for assessing the local extension program planning process. The unit directors indicated that all criteria describing standards to follow in planning local programs were used from a high to medium degree as guides during their planning process. The unit directors also indicated that all criteria are important in local extension planning process activities.

Hillison, J. (1986). Agricultural teacher education preceding the Smith-Hughes Act. Staff study, Virginia Tech, Blacksburg.

The purpose of the study was to identify the activities occurring in teacher education for agricultural education during the years 1900-1916. Many factors influenced the rapid

growth in popularity of agricultural education during this era. Nature-study at the elementary level was quite popular.

In 1905 USDA issued a circular just for elementary agriculture instruction. The movement also advanced to the high school level. For school year 1915-16 there were over 3,600 high schools offering agricultural instruction, with over 73,000 students enrolled. This popularity demanded that more teachers be prepared. Various option for teacher preparation were suggested. Among the options were (1) home study, correspondence work, and teachers' institutes. Another consideration was where the preparation should occur at normal schools or at land-grant universities. In 1907 The Nelson Amendment was passed by the U. S. Congress to support agricultural teacher preparation at land-grant colleges and universities. What was accomplished by passage of the Smith-Hughes Act in 1917 set the stage for teacher preparation as part of the Act and, in many ways, simply continued that trend.

Hillison, J. H.; Camp, W. G.; & Burke, S. R. (1986). Factors influencing the decision to major in agricultural education 1980-1985. Staff study, Virginia Tech, Blacksburg.

Students majoring in agricultural education at Virginia Tech in 1980 (n=54) and again 1985 (n=46) were surveyed to determine and rate the importance of factors influencing them to major in agricultural education. Analysis was done to compare the results based on sex and program option and year group. Major findings were that: 1. recruitment efforts should emphasize the employment flexibility of agricultural education as a major; 2. recruitment efforts should be targeted more toward the people influencing the student's decisions (parents, teachers, counselors) than presently and less toward the student personally; and 3. recruitment approaches for extension-option students need to be different than those used for teaching-option students.

McMillion, Martin B. (1986). Duties and compensation of Virginia ag teachers 1986 and 1977. Staff Study, Virginia Tech, Blacksburg.

The objectives of this study were: (1) to determine what extra duties teachers of agriculture performed, (2) to determine the salary and other benefits received, and (3) to compare the results of the above objectives with the results of an identical 1977 study.

All teachers of agriculture in Virginia were asked to complete a survey instrument at a regular area teachers'

meeting. Absentees were mailed the instruments. Survey instruments were obtained from 96 percent of the teachers.

The responses were summarized and described using percents, measures of central tendencies and other descriptive measures.

Fewer but more experienced teachers were teaching in 1986 than in 1977. The average years of teaching was up 2 years to 12.6 since 1977. The median years of teaching experience was up from 7 to 10 years during the same period. The number and kind of extra duties were essentially unchanged.

Salaries varied between a low of $15,000 to over $35,000. The median salary category was $22,000. Salaries included the adult teaching supplement. Salaries had doubled in the nine-year period, which just caught up with the consumer price index.

WEST VIRGINIA

Ahrend, C. D. (1986). An assessment of environmental education by the cooperative extension service in West Virginia as perceived by the county extension agents of West Virginia. Masters thesis, West Virginia University.

The primary objective of this study was to ascertain the extent to which the cooperative extension service in West Virginia is addressing environmental and/or conservational education. All county extension faculty in West Virginia were surveyed through a questionnaire. Responses were received from 90.28 percent. Data indicated the majority of information on environmental and conservational issues was provided to 4-H clubs and homeowners. The two most prevalent requests for information were in areas of energy conservation and litter control. Agents consider extension publications, extension specialists, other agents and self-generated data as their major sources of information. Information is most often disseminated through extension publications, telephone, newspapers and personal visits.

Arnold, C. N. (1986). Housing needs as perceived by flood victims in Preston County. Masters thesis, West Virginia University.

The major purpose of this study was to investigate questions relative to the housing needs and desires of Preston County families affected by the flooding that occurred in November of 1985. Volunteers interviewed 396 families to obtain data. Of the 396 families interviewed, 297 had their homes destroyed or severely damaged by the flood waters. Approximately 30 percent of the victims were 60 years of age or older. The vast majority desired to return to some form of single family dwelling or mobile home, but were unsure as to means for meeting their desires. Few had flood insurance, and very few had knowledge of flood plain lines. It was concluded that many flood victims remain unsure as to their plans for permanent housing. Much of the indecision can be attributed to the lack of resources through various housing assistance agencies.

Bland, S. F. (1985). Recruitment practices and criteria for selection of first-year vocational agriculture students as perceived by vocational agriculture teachers, guidance counselors, and state supervisors of vocational agriculture. Masters thesis, West Virginia University.

Primary objectives of this study were to determine recruitment practices and criteria for selection of first-year vocational agriculture students as perceived by vocational agriculture teachers, guidance counselors and state supervisors of vocational agriculture. A two percent systematic sample of vocational agriculture teachers was drawn from the Agriculture Teachers Directory. Guidance counselors from the same schools were surveyed as were state supervisors of vocational agriculture. Four major types of recruitment practices used were middle school programs, preregistration and orientation programs, guidance counselor interviews, and preenrollment visits by vocational agriculture teachers. Participants viewed expressed interest in agriculture, occupational objective in agriculture, parental approval and opportunity for experience program as major criteria that should be used for placing students into first-year vocational agriculture programs.

Boggess, J. K. (1985). Major problems encountered in teaching vocational agriculture as perceived by women vocational agriculture teachers. Masters thesis, West Virginia University.

This study was designed to identify major problems encountered by females engaged in teaching vocational agriculture. Data were obtained from a 50 percent systematic sample of female vocational agriculture teachers identified in the Agriculture Teachers Directory. A modified delphi technique was used to collect data. Women teachers perceived the most problems in instructional programs, professional and technical development, administration, community relations and personal life. Recruitment of quality students interested in agriculture was identified as the most serious problem encountered. Three additional major problems also dealt with student quality. Married women teachers found it difficult to balance teaching with personal and family life demands.

Diaz S. A. (196). History of the agricultural cooperative movement in El Salvador. Masters thesis, West Virginia University.

The objective of this study was to document the history of agricultural cooperatives in El Salvador from their earliest formation through the land reform period of the 1980's and, to the extent possible, to determine the influence of the cooperatives on socio-economic progress. Data were obtained through literature and documents from the U.S. Library of

Congress, the Wisconsin University Center for Cooperatives, WVU Libraries, and by interviews with knowledgeable individuals in El Salvador. Political, economic, and social conditions have delayed the development of cooperative associations. Early societies were handicapped because they were created with no legal regulations. Lack of a workable constitution with laws applicable to all citizens has also hindered the movement. Because of the current political instability of El Salvador, the future, and thus the impact, of agrarian cooperatives remains uncertain.

Earnest, G. W. (1986). Perceived microcomputer competencies needed by county cooperative extension agents in West Virginia. Masters thesis, West Virginia University.

The primary objective of this study was to determine the perceived microcomputer competencies needed by county cooperative extension agents in West Virginia. County extension agents of the state were surveyed through a questionnaire. Responses were received from 94.6 percent of the population. Data indicated that agents have a great need for extension application and instructional application competencies, a moderate need for hardware competencies, and a slight need for awareness/literacy and programming competencies. Two thirds of the agents have had fewer than 11 hours of microcomputer training. Extension agents in home economics indicated they are the least competent users of microcomputers.

Fichtner, J. W. (1985). The need for education as perceived by dairy goat breeders of West Virginia. Masters thesis, West Virginia University.

This study was designed to determine scope of West Virginia dairy goat operations, available educational programs and types of educational programs desired by goat breeders. Data were obtained from the 85 dairy goat breeders who were members of the American Dairy Goat Association in 1984. Over two thirds of the breeders have kept goats for four or more years and have ten or fewer mature does. Primary purposes for goats were milk production, sale of breeding stock, and pasture management. The majority of breeders said classes were not available in their local areas, but believed that educational programs would benefit the dairy goat industry. Preferred class topics included health care and diseases, marketing products, nutrition and cheese making.

Gajian, K. K. (1985). Agricultural extension agents and services in Zanzibar as perceived by progressive farmers. Masters thesis, West Virginia University.

The objective of this study was to determine means by which the Zanzibar extension service can become more effective as perceived by the progressive farmers. Data were obtained through interviews with 279 progressive farmers from the five regions of Zanzibar and Pemba Islands. It was found that only 23 percent of the farmers had been visited by their extension agents. The progressive farmers rated their extension agents highly in their enthusiasm in working with farmers, their beliefs in extension work, ability to maintain farmers' interests in agricultural extension programs and ability to transmit agricultural information. Agents were rated low in their abilities to find solutions to farmers' problems, and in their competencies in agricultural skills. Farmers who had been visited frequently and those who had attended meetings with the extension agent tended to give higher ratings to the agents and the extension service than others.

Saad, A. B. (1985). Perceived leadership behaviors of county directors of vocational education in West Virginia. West Virginia University.

The major concern of this study was to determine the relationships between vocational directors' self-perceived ideal and real behaviors and those behaviors as perceived by vocational teachers. The adapted Leader Behavior Description Questionnaire was used to measure the dimensions of Initiating Structure and Consideration of vocational directors' behavior. Questionnaires were mailed to 55 vocational directors and 275 vocational teachers, representing all 55 counties in West Virginia. Responses from 39 vocational directors and 155 vocational teachers, which constituted 57.9 percent, provided usable data for analysis. It was concluded from the study that vocational teachers perceive their directors lower than do directors themselves on real Initiating Structure and real Consideration dimensions of leader behavior; there is no difference between perceptions of directors and teachers concerning ideal Initiating Structure and ideal Consideration dimensions of director behaviors; and directors are not influenced by demographic variables in perceiving their behaviors.

Seymour, D. A. (1986). Values of continuing education in agri-

culture as perceived by young farmer association members in West Virginia. Masters thesis, West Virginia University.

The primary objective of this study was to evaluate the results and to determine major problems in young adult farmer programs in West Virginia. Data were collected through surveys sent to Young Farmer Association members in West Virginia during the school year 1983-84. Respondents indicated that participation in young adult farmer classes had had a positive influence on farm production and on their abilities in farm management. Considered the most effective instructional methods for adult classes were lectures by specialists, field trips, demonstrations and lectures by vocational agriculture teachers. Additional instruction was perceived to be needed in agriculture business, agronomy, agricultural mechanics and livestock.

Smith, K. Y. (1986). Factors affecting student discontinuance of vocational agriculture. Masters thesis, West Virginia University.

The primary purpose of this study was to determine the degree to which selected factors contribute to student discontinuance of vocational agriculture. Schools in seven counties located in eastern Ohio were chosen for study. One hundred eighteen students who had completed the first year of vocational agriculture were surveyed. It was found that 19.5 percent of the students dropped out of vocational agriculture after their first year of instruction. Students who developed no supervised occupational experience program and those who were not participants in FFA activities tended to drop out of the program more readily. Students whose guardians farmed part or full time had the lowest dropout rate. Reasons most often given for dropping out of vocational agriculture were scheduling conflicts and dislike of teacher.

Weerakkodoy, P. W. (1986) Major problems which affect the dissemination of agricultural information to farmers/ranchers by extension agents as perceived by county agricultural extension agents. Masters thesis, West Virginia University.

The primary objective of this study was to determine major problems encountered by extension agents in disseminating agricultural information to farmers/ranchers as perceived by county agricultural extension agents. A modified delphi technique was used to obtain data. Two survey forms were sent to participants. The first was sent to the 49 state presidents of

CEAA, and requested them to identify the five major problems which, in their opinions, most seriously affect the dissemination of agricultural information by extension agents. Responses formulated a second instrument which was sent to a stratified random sample of 199 county extension agents, four from each state. Participants were asked to rate the severity of each statement. Problems which most seriously affect dissemination of agricultural information, identified by agents, were a) the high cost of agricultural operations and low product prices; b) financial status of farmers/ranchers and c) lack of time to spend on one-on-one contact with clientele.

Wilkinson, J. A. (1986). Use of Farmers Home Administration youth operating loans as perceived by a random sample of county supervisors nation-wide. Masters thesis, West Virginia University.

This study was designed to determine extent of youth operating loans in use and characteristics of those loans. Data were obtained through a survey of county supervisors throughout the USA. Youth loans were most frequenty used for livestock, operating, farm machinery, and crop production loans. Most loans were from $2,000 to $5,000, and were for a period of time from 2 to 7 years. The majority of loans have been made in the north-central and southern regions.

WISCONSIN

Larson, K. (1986). An Assessment of Selected Characteristics and Perceptions of Former, Noncompleting Students Enrolled in the University of Wisconsin-River Falls Extended Degree Program in Broad Area Studies in Agriculture. Master of Science Thesis, University of Wisconsin-River Falls, River Falls.

The purpose of this study was the assessment of selected characteristics and selected perceptions of students who did not complete courses in the University of Wisconsin-River Falls, Extended Degree Program in Broad Area Studies in Agriculture. The assessment compared personal characteristics with perceptions in the area of academic, employment, financial and personal concerns.

The population included former Extended Degree students who had not completed one or more courses for which they had enrolled. Ninety three former, noncompleting students had current addresses available. Fourty-six percent of the former Extended Degree students responded to the questionnaire. Data were collected using a mailed questionnaire. A five point Likert-type scale was used in the design of the questionnaire.

Major findings noted that former, noncompleting Extended Degree students indicated that employment factors had the greatest influence on the noncompletion of Extended Degree courses. There was also a significant relationship between educational intentions at enrollment and course noncompletion.

The major recommendations included: 1) Conduct research to develop family support means to encourage course completion, 2) conduct additional research on the relationship of personal factors to course noncompletion, 3) development of a time management program appropriate for Extended Degree students, 4) future research on that motivates Extended Degree students, 5) development of learning activities to improve Extended Degree students' study skills, and 6) conduct research on the relationship of employment factors to course noncompletion.

Pur, J. T. (1986). A Review of the Status of Advisory Councils in Wisconsin High School Vocational Agriculture Departments. Master's Thesis, University of Wisconsin,River Falls.

The purpose of the study was to review the status of advisory committees in Wisconsin high school vocational agriculture departments. The objectives were: 1) to determine the development of advisory committees; 2) to determine the organization and operation of the advisory committees; and 3) to determine the functions and the utilizations of the advisory committees.

The data collected was from the research that had been conducted on advisory councils in high school vocational agricul-

tural departments. The study particularly, focused on the studies conducted by William Peterson, 1972, and Thomas Parslow, 1968. Peterson obtained data by sending questionnaires to 260 vocational agriculture departments in Wisconsin. While Parslow generated data from 236 responses received from agriculture departments that had single agriculture teacher and the remaining 24 from chairmen of multiple-agriculture teacher departments.

Major findings of the study were: 1) not all vocational agriculture departments in Wisconsin have organized advisory committees; 2) the average number of members in each committee was 8.8 persons and one-third were farmers, they meet 2 to 3 times a year; 3) the instructors do not feel that the advisory committee members are competent enough to help them in planning instructional procedures; 4) there should be a regular scheduled meeting and each meeting should have a prepared agenda; 5) after the meeting each member should have a copy of the meeting's minutes; and 6) the chairperson of the committee should not be the vocational agriculture instructor.

The committee's functions include: a) act as a liaison officer between the vocational agricultural departments and community; b) assist in curriculum planning and development; c) assist in reviewing the courses and the curriculum as a whole; and d) assist in facilities, equipment, and the general laboratory/shop evaluation.

Based on the findings and the conclusions of the study, the following recommendations were made: 1) use the Future Farmers of America (FFA) Alumni members to establish an effective advisory committee; 2) all students who are planning on going to teach in the Vocational Agriculture Department should receive some instruction on advisory committees during their undergraduate studies or the State Department of Public Instruction should have a booklet on how the agricultural instructors should make the best use of the advisory committee; and 3) there is a need to update the research on the status and the importance of advisory committees in Wisconsin vocational agriculture departments.

RESEARCH AND DEVELOPMENT ACTIVITIES IN PROGRESS

ARKANSAS

Bullard, M. F., and Arthur N. Employment profile of agriculture graduates from the University of Arkansas. Master's thesis. University of Arkansas, Fayetteville.

Ellibee, M. A., and Arthur, N. Projected employment opportunities and educational needs of Arkansas's agricultural industry. Master's thesis. University of Arkansas, Fayetteville.

CALIFORNIA

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Thompson, O. E. & Gwynn, D. B. Farm bankruptcies in California. Staff study. Applied Behavorial Sciences, University of California, Davis.

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COLORADO

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Kellogg, W.C. Jr. Perceptions of the Name "Future Farmers of America" (FFA) Upon Enrollment in Vocational Agriculture Programs, Participation in the FFA Organization, and Financial Support for the FFA Program. Doctor of Philosophy dissertation. Colorado State University, Fort Collins.

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Arrington, L. R., Cheek, J. G. and Tylke, R. J. Relationship between student achievement in applied principles of agribusiness and Natural resources education and supervised occupational experiences program scope. Agricultural and Extension Education, University of Florida, Gainesville.

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